

KUSKOKWIM AREA SALMON ESCAPEMENT OBSERVATION CATALOG  
1984 - 1991

Compiled and Edited by

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## FOREWARD

The Kuskokwim Area Salmon Escapement Observation Catalog is intended to present all of the known adult salmon escapement observations for the streams and tributaries which eventually drain into Kuskokwim Bay. Although the data consists mainly of aerial observations by Alaska Department of Fish and Game personnel, it may also include observations from foot or boat surveys, literature review, department escapement projects, and oral or written communications from various agencies and private citizens.

This data is easily misinterpreted and misused by persons who are unfamiliar with the limitations of aerial observation techniques or by those without experience observing salmon in Kuskokwim area streams. It is therefore requested that this data not be cited or used in any manner except in consultation with the author, whose duties normally include responsibility for the database.

The information contained in this report is of a type which was originally recorded on special forms and filed in loose leaf notebook binders. Gary Schaefer (ADF&G) coordinated the task of establishing a database and reporting system on the University of Alaska Honeywell computer in 1976. This was transferred to the State of Alaska IBM mainframe computer in 1983. Escapement survey data for 1988 was the last information added to the mainframe database. For several years thereafter, the hand written escapement observation forms were simply copied and distributed as basic data.

There were several factors which made the mainframe computer system unsuitable as a tool for managing the data. Primary was the lack of emphasis for professional computer personnel to maintain the database and produce annual reports. Secondary was the problem of gaining access to a timesharing system with a burgeoning subscriber base. In 1983 the decision was made to implement the database in one of the microcomputer systems which were then becoming available. A programmer was assigned to design a database management system using RBase 4000, the new commercial database management software from MicroRim Corporation. Before the assignment was completed, the programmer transferred to another position.

In December 1985, Dan Schneiderhan (then Kuskokwim Salmon Research Project Leader) received a copy of RBase 5000, MicroRim Corporation's successor to RBase 4000. The software proved easy to learn and capable of handling the Kuskokwim escapement data.

After two months of intensive effort, Dan developed a working database management system that used a series of menus to lead the user through the processes of entering data, reviewing and editing data, and printing reports. Several months of refinement followed, and an updated Kuskokwim salmon observation catalog was produced in October 1986. It was the first comprehensive report of the Kuskokwim salmon escapement data to be issued since 1983.

In February 1987, the A-Y-K Region upgraded the RBase software to the most recent version, RBase System V. The new program corrected some problems with RBase 5000

which caused compromises to be made in the organization of the Kuskokwim database system. Recently, MicroRim Corporation introduced another upgrade, RBase for DOS. This catalog was produced using the most recent RBase software. It represents all available Kuskokwim Area salmon escapement data for the period 1984 through 1990.

The catalog is organized with the stream observations followed by three reference indexes: 1) data type definitions, 2) observer and agency index, and 3) stream location index.

Data prior to 1984 is available as a separate document titled "Kuskokwim Salmon Escapement Observations, 1954-1983" which is available upon request.

This catalog may contain errors and omissions. Please notify the author of any deficiencies. The format for future editions can be changed relatively easily if there is enough support among users for doing so. Revisions to the system application may be made as suggestions and comments are received.

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* 07/14/84      Quality: 0.75      Rating: 2      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
2	6	DS	ADFG	1	3	1	2	2	2	1	100	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	8	0	0	8510	0	0	0	0	0	0	0	
102	8	0	0	490	0	0	0	0	0	0	0	
103	49	0	0	125	0	0	0	0	0	0	0	
104	52	0	0	14	0	0	0	200	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	117	0	0	9139	0	0	0	200	0	0	0	

* 08/05/84      Quality: 0.7      Rating: 3      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
4	6	DS	ADFG	3	1	4	1	3	2	1	36	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	0	0	
102	778	0	130	1985	7000	0	0	0	0	0	0	
103	36	0	12	372	400	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	814	0	142	2357	7400	0	0	0	0	0	0	

\* DID NOT SURVEY AREA 101. ENDED SURVEY AT MOUTH OF KIPCHUK R. IN AREA 103. SURVEYED FROM MOUTH OF BUCKSTOCK R. TO MOUTH OF KIPCHUK R. \*

Stream: ANIAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613440N

Longitude: 1592910W

```

* 08/05/84      Quality: 0.7      Rating: 3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*    3    6     KF   ADFG     3         1     4       1       3       2       1       35
*
*   INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Live   Dead   Live   Dead
*                Chinook Chinook   Redd    Chum   Chum   Pink  Pink  Sockeye Sockeye Coho   Coho
*
*   101          0     0     0         0     0     0     0     0     0     0     0     0
*   102          91     0    106       2052  0     0     0     0     0     0     0     0
*   103          15     0     7         500   0     0     0     0     0     0     0     0
*   104           0     0     0         0     0     0     0     0     0     0     0     0
*   105           0     0     0         0     0     0     0     0     0     0     0     0
*
*   TOTAL       106     0    113       2552  0     0     0     0     0     0     0     0

```

\* IN 101 MANY 100S OF CHUM CARCASSES, ALSO MANY SPAWNING AREAS OF CHUMS. UNABLE TO SURVEY BECAUSE OF PDOR LIGHT AND NATURAL TURBIDITY. 102 AGAIN EVERY BAR HAD MANY CARCASSES - MOSTLY CHUM. COUNTED 23 LARGE CHUM SPAWNING AREAS. LIGHT AND BOTTOM MADE LIVE CHUM ALMOST INVISIBLE AS DISCOVERED WHEN SUN CAME OUT FOR FEW MILES. ENDED 103 AT KIPCHUK RIVER DUE TO IMPOSSIBLE LIGHT CONDITIONS.

```

* 08/27/84      Quality: 0.65      Rating: 3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*    5    6     DS   ADFG     1         3     1       3       3       2       1       100
*
*   INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Live   Dead   Live   Dead
*                Chinook Chinook   Redd    Chum   Chum   Pink  Pink  Sockeye Sockeye Coho   Coho
*
*   101          0     0     0         0     0     0     0     0     0     0     0     0
*   102          0     0     0         0     0     0     0     0     0     0    4260  0
*   103          0     0     0         0     0     0     0     0     0     0     711   0
* 104          0     0     0         0     0     0     0     0     0     0    232  0
*   105          0     0     0         0     0     0     0     0     0     0     0     0
*
*   TOTAL       0     0     0         0     0     0     0     0     0     0    5204  0

```

\* BEGAN AT BUCKSTOCK R. ENDED AT ANIAK LAKE. SURVEY RATED POOR DUE TO HIGH TURBIDITY AND EARLY SURVEY.

Stream: ANIAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613440N

Longitude: 1592910W

\* 07/30/85      Quality:    0.6      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
67	6	DS	ADFG	3	2	3	3	3	2	1	12
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	3	0	0	50	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	40	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	43	0	0	50	0	0	0	0	0	0	0

\* AREA 104 WAS A FAIR SURVEY. ALL ELSE WAS POOR. \*

\* 07/28/86      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
101	6	DS	ADFG	3	1	1	2	2	2	2	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	17	0	0	440	1	0	0	180	0	0	0
103	359	0	0	170	0	0	0	14	0	0	0
104	48	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	424	0	0	610	1	0	0	194	0	0	0

\* SURVEY BEGAN BUCKSTOCK R. WATER = 3. ABOVE SALMON RIVER WATER = 2. ABOVE GEMUK MTN. WATER = 1. THIS WAS PRIMARILY A CHINOOK SURVEY; AS SUCH RATED 2. PODR (3) CHUM SURVEY. ELAPSED TIME 95 MINUTES. \*

Stream: ANIAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613440N

Longitude: 1592910W

\* 07/27/87      Quality:    0.75      Rating:      3

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
124	6	DS	ADFG	2	1	1	3	3	2	2	75
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	15	0	5	1030	0	0	0	20	0	0	0
102	30	2	2	976	3	0	0	38	0	0	0
103	131	0	21	100	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	176	2	28	2106	3	0	0	58	0	0	0

\* Very turbid in lower 101 (T=4), turbid in upper area 101 (t=3) and 102 (t=3), slightly turbid in area 103 (t=2), area 104 not surveyed. Survey ended at Gemuk Mt. Spawn stage: chinook=2, chum=2.

\* 07/18/88      Quality:    0.7      Rating:      3

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
199	6	DS	ADFG	1	3	2	3	2	1	1	25
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	61	0	0	0	0	0	0	0	0	0	0
104	38	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	99	0	0	0	0	0	0	0	0	0	0

\* Complete survey of 104; partial survey of 103. Water became too turbid to continue survey. Began at lake and ended about 25 miles downriver. C-172RG.

Stream: ANIAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613440N

Longitude: 1592910W

\* 07/24/88      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
208	6	DS	ADFG	2	2	2	2	2	2	1	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	8250	0	0	0	100	0	0	0
102	530	8	0	15750	440	0	0	1355	0	0	0
103	299	1	0	508	200	0	0	220	0	0	0
104	118	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	945	9	0	24508	640	0	0	1675	0	0	0

\* Began at Aniak Lake, ended 1/2 mile below sonar camp. Water=2-3 in lower river, water=1-2 in upper/middle river. C-172R6.

\* 07/26/89      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
227	3	CB	ADFG	1	2	2	2	2	2	1	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	110	0	0	2490	0	0	0	0	0	0	0
102	620	0	0	3220	0	0	0	0	0	0	0
103	1080	0	0	0	0	0	0	0	0	0	0
104	180	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1990	0	0	5710	0	0	0	0	0	0	0

\* NONE

Stream: ANIAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613440N

Longitude: 1592910W

\* 07/26/89      Quality:    0.75      Rating:      2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
234	3	DS	ADFG	2	2	2	2	2	2	2	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	1211	0	0	0	0	0	0	0	0	0	0
103	766	0	0	402	0	0	0	0	0	0	0
104	132	0	0	6061	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2109	0	0	6463	0	0	0	0	0	0	0

\* Began at Aniak Lake. Ended 12 miles from mouth. Upper half 70% cloud cover. Lower half clear.

\* 07/19/90      Quality:    1.      Rating:      1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
272	6	CB	ADFG	1	1	1	1	1	1	1	135
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	52			1500							
102	309			10580							
103	872			3500							
104	74			0							
105											
TOTAL	1307	0	0	15580	0	0	0	0	0	0	0

\* Surveyed top one third of 101 - poor water visibility in 101 - aircraft C-207

Stream: ANIAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613440N

Longitude: 1592910W

* 07/23/91 Quality: 0.65 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
----	---	----	----	---	---	---	---	---	---	---	---	
303	3	CB	ADFG	2	1	4	2	3	2	1	1	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101												
102	918			850								
103	408											
104	238											
105												
TOTAL	1564	0	0	850	0	0	0	0	0	0	0	
* Overcast and rain on 102. Water clarity no good for 101. Overcast on 104 and 103 which effected chum count the most. Water level high. *												

Stream: ANIAK SONAR PROJECT

Drainage: ANIAK RIVER

Latitude: 613009N

Longitude: 1592226W

\* 09/12/80      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
271	12	DS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	56469			1178589						81566	
102											
103											
104											
105											
TOTAL	56469	0	0	1178589	0	0	0	0	0	81566	0

\* Sonar operational from 8/22 - 7/30, 8/16 -9/12. Data are estimated total escapements.

\* 08/14/81      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
6	12	DS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	42060	0	0	568426	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42060	0	0	568426	0	0	0	0	0	0	0

\* TOTAL SEASON ESCAPEMENT ESTIMATE APPORTIONED BY TEST NET SPECIES COMPOSITION 6/15-8/14.

\* 08/01/82      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
7	12	DS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	33864	0	0	420364	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	33864	0	0	420364	0	0	0	0	0	0	0

\* TOTAL SEASON ESCAPEMENT ESTIMATE APPORTIONED BY TEST NET SPECIES COMPOSITION 6/21-8/1 \*

\* 07/28/83      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
8	12	DS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	4911	0	0	124058	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	4911	0	0	124058	0	0	0	0	0	0	0

\* TOTAL SEASON ESCAPEMENT ESTIMATE APPORTIONED BY TEST NET SPECIES COMPOSITION. 6/19-7/28. \*

Stream: ANIAK SONAR PROJECT

Drainage: ANIAK RIVER

Latitude: 613009N

Longitude: 1592226W

```

* 07/30/84      Quality: 1.25      Rating: 2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -----  ---  -----  ----  ---  -----  ----  -----  -----  -----  -----
*    9    12    DS   ADFG      0        0      0        0        0        0        0        0        0
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*   101                0        0        0      275261      0        0        0        0        0        0        0
*   102                0        0        0        0        0        0        0        0        0        0        0
*   103                0        0        0        0        0        0        0        0        0        0        0
*   104                0        0        0        0        0        0        0        0        0        0        0
*   105                0        0        0        0        0        0        0        0        0        0        0
*
*   TOTAL                0        0        0      275261      0        0        0        0        0        0        0

```

\* TOTAL SEASON ESCAPEMENT ESTIMATE INCLUDES CHUM AND CHINOOK COUNTS. PROBABLY 90 PERCENT OR GREATER ARE CHUM. TEST NET SAMPLE SIZE TOO SMALL FOR APPORTIONMENT.

```

* 07/31/85      Quality: 1.25      Rating: 2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -----  ---  -----  ----  ---  -----  ----  -----  -----  -----  -----
*   267   12    OS   ADFG      0        0      0        0        0        0        0        0        0
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*   101                0        0        0      253048
*   102                0        0        0
*   103                0        0        0
*   104                0        0        0
*   105                0        0        0
*
*   TOTAL                0        0        0      253048      0        0        0        0        0        0        0

```

\* Sonar operational from 6/22 - 7/31. Data is estimated total escapement.

```

* 07/31/86      Quality: 1.25      Rating: 2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      268  12    DS   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live  Dead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*      INDEX      Chinook Chinook  Redd  Chum  Chum  Pink  Pink  Sockeye Sockeye Coho Coho
*
*      101
*      102
*      103
*      104
*      105
*
*      TOTAL      0      0      0      209080      0      0      0      0      0      0      0
*
* Sonar operational from 6/25 - 7/25.
    
```

```

* 07/31/87      Quality: 1.25      Rating: 2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      269  12    DS   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live  Dead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*      INDEX      Chinook Chinook  Redd  Chum  Chum  Pink  Pink  Sockeye Sockeye Coho Coho
*
*      101
*      102
*      103
*      104
*      105
*
*      TOTAL      0      0      0      193464      0      0      0      0      0      0      0
*
* Sonar operational from 6/21 - 7/31. Data is estimated total escapement.
    
```

Stream: ANIAK SONAR PROJECT

Drainage: ANIAK RIVER

Latitude: 613009N

Longitude: 1592226W

\* 07/31/88      Quality: 1.25      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
270	12	DS	AODG	0	0	0	0	0	0	0	0	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101				401511							
	102											
	103											
	104											
	105											
TOTAL			0	0	0	401511	0	0	0	0	0	0

\* Sonar operational from 6/23 - 7/31. Data is estimated total escapement. \*

\* 07/24/89      Quality: 1.25      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
298	12	DS	AODG									
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101				243936							
	102											
	103											
	104											
	105											
TOTAL			0	0	0	243936	0	0	0	0	0	0

\* Sonar operational from 6/21 to 7/24. Data is estimated total escapement. \*

\* 08/06/90      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
295	12	CA	ADFG								
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101				300408							
102											
103											
104											
105											
TOTAL	0	0	0	300408	0	0	0	0	0	0	0

\* Sonar operational from 6/23 - 8/06. Data is estimated total escapement. \*

\* 07/29/91      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
322	12	CA	ADFG								
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101				282475							
102											
103											
104											
105											
TOTAL	0	0	0	282475	0	0	0	0	0	0	0

\* Sonar operational from 6/29 to 7/29. Data is estimated total escapement. \*



Stream: AROLIK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 593800N

Longitude: 1613600W

* 07/27/87 Quality: 0.85 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Wis.	Bottom	Sun Angle	Distance	
----	----	----	-----	----	----	----	----	----	----	----	----	
126	3	KS	ADFG	2	1	1	2	2	2	1	35	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	764	0	0	2205	0	0	0	1363	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	764	0	0	2205	0	0	0	1363	0	0	0	



Stream: BEAR CREEK

Drainage: TULUKSAK RIVER

Latitude: 610000N

Longitude: 1595800W

\* 10/14/85      Quality:    0.6      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
75	7	KF	ADFG	3	2	4	2	3	2	3	10
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	3	1
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	3	1

\* LOWER 2 MILES NYAC TO SHAMROCK CREEK UNSURVEYABLE DUE TO TURBIDITY CAUSED BY HIGH WATER. CREEK WAS BANK FULL BUT VISIBILITY IMPROVED AS WE PROCEEDED UPSTREAM. CARCASS WAS FOUND ABOVE PREVIOUS UPPER LIMIT. EXTENSION WAS CONFIRMED BY ELECTROFISHING ON THE 10/15 WHICH TOOK A 70MM COHO FRY. AERIAL SURVEYS NOT POSSIBLE ON 15TH DUE TO WEATHER. \*

\* 08/02/86      Quality:    0.75      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
121	2	DW	TDCO	2	3	2	2	2	1	1	5
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

\* SEE 7/7/86 DW TULUKSAK SURVEY \*

Stream: BEAR CREEK

Drainage: TULUKSAK RIVER

Latitude: 610000N

Longitude: 1595800W

* 08/01/87 Quality: 1. Rating: 1 *															
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance	*
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	*
187	9	DW	RGCO	2		1	1	1	1	1	1	1		3	*
															*
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead		*
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho		*
101		3	0	0		0	0	0	0	0	0	0	0	0	*
102		0	0	0		0	0	0	0	0	0	0	0	0	*
103		0	0	0		0	0	0	0	0	0	0	0	0	*
104		0	0	0		0	0	0	0	0	0	0	0	0	*
105		0	0	0		0	0	0	0	0	0	0	0	0	*
TOTAL		3	0	0		0	0	0	0	0	0	0	0	0	*

Stream: BESSIE CREEK

Drainage: AROLIK RIVER

Latitude: 594230N

Longitude: 1614400W

* 09/04/84      Quality:    1.      Rating:      1      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
19	1	KF	AODG	2	1	1	1	1	1	1	1	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	14	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	0	14	0	

\* ON GOODNEWS TO BETHEL FLIGHT CROSSED THREE UPPER TRIBS OF BESSIE CREEK FLOWING OUT OF THUMB MOUNTAIN AT 90 DEGREES AND SAW TOTAL OF 14 SPAWNING PAIRS OF COHO. \*

Stream: CANYON CREEK

Drainage: KWETHLUK RIVER

Latitude: 601400N

Longitude: 1601500W

```

* 07/13/84      Quality:  0.85      Rating:      3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*      20   6     KF   ADFG     1         1     2       1      3         1       1         15
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          9         0         0         102       0         0         0         0         0         0         0
*      102          0         0         0          0         0         0         0         0         0         0         0
*      103          0         0         0          0         0         0         0         0         0         0         0
*      104          0         0         0          0         0         0         0         0         0         0         0
*      105          0         0         0          0         0         0         0         0         0         0         0
*
*      TOTAL          9         0         0         102       0         0         0         0         0         0         0

```

\* I WAS ON WRONG SIDE OF AIRPLANE FOR SURVEY. SEE DS SURVEY OF SAME DATE.

```

* 07/23/85      Quality:  0.8      Rating:      2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*      92   6     DS   ADFG     2         1     3       1      2         2       1         25
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          80        0         0         26         0         0         0         0         0         0         0
*      102          0         0         0          0         0         0         0         0         0         0         0
*      103          0         0         0          0         0         0         0         0         0         0         0
*      104          0         0         0          0         0         0         0         0         0         0         0
*      105          0         0         0          0         0         0         0         0         0         0         0
*
*      TOTAL          80        0         0         26         0         0         0         0         0         0         0

```

\* KWETHLUK RIVER AREA 103 AND DOWNSTREAM VERY TURBID DUE TO SNOWMELT IN HEADWATERS CAUSING HIGH WATER LEVELS UPSTREAM OF CONFLUENCE WITH CANYON CREEK.

Stream: CANYON CREEK

Drainage: KWETHLUK RIVER

Latitude: 601400N

Longitude: 1601500W

\* 07/31/85      Quality:    0.9      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
97	6	KF	ADFG	1	1	3	1	1	1	1	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	9	0	0	0	0	0	0	0	0	0	0
102	3	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12	0	0	0	0	0	0	0	0	0	0

\* BEGAN AT LITTLE SWIFT CREEK. CLOUD LAYER FORMING AT 1000 FT. REACHED KWETHLUK RIVER UNDER LOW LIGHT LEVELS. QUIT. \*

\* 07/23/87      Quality:    0.65      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
130	2F	DS	ADFG	0	2	3	2	3	2	1	18
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

\* Canyon Creek high; relatively turbid. \*

Stream: CANYON CREEK

Drainage: KWETHLUK RIVER

Latitude: 601400N

Longitude: 1601500W

```

* 07/31/87      Quality:  0.95      Rating:      1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      186   2F    OH   ADFG     2       1       2       1       1       1       1       18
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum      Chum    Pink    Pink    Sockeye  Sockeye  Coho    Coho
*
*      101          124      0       0       310      1       0       0       0       0       0       0
*      102           0       0       0        0       0       0       0       0       0       0       0
*      103           0       0       0        0       0       0       0       0       0       0       0
*      104           0       0       0        0       0       0       0       0       0       0       0
*      105           0       0       0        0       0       0       0       0       0       0       0
*
*      TOTAL      124      0       0       310      1       0       0       0       0       0       0
*
* Surveyed entire Canyon Creek to Kwethluk River. Kwethluk very turbid. USFWS furnished the plane and pilot. USFWS observer Ray Jones
* was aboard.

```

```

* 07/16/88      Quality:  0.8      Rating:      2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      196   6     OS   ADFG     1       2       2       2       2       1       1       10
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum      Chum    Pink    Pink    Sockeye  Sockeye  Coho    Coho
*
*      101           7       0       0        0       0       0       0       0       0       0       0
*      102           0       0       0        0       0       0       0       0       0       0       0
*      103           0       0       0        0       0       0       0       0       0       0       0
*      104           0       0       0        0       0       0       0       0       0       0       0
*      105           0       0       0        0       0       0       0       0       0       0       0
*
*      TOTAL       7       0       0        0       0       0       0       0       0       0       0
*
* Survey early. C-172RG.

```

Stream: CANYON CREEK

Drainage: KWETHLUK RIVER

Latitude: 601400N

Longitude: 1601500W

\* 08/02/88      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
214	2F	OS	ADFG	3	2	3	1	2	2	1	15
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	142	2	39	30	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	142	2	39	30	0	0	0	0	0	0	0

\* Began SE of Icebox Lake, ended at confluence with Kethluk River. Low, clear water made chinook easily visible. Good numbers of chinook redds; few redds abandoned. USFWS aircraft piloted by George Walters. \*

\* 07/26/89      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
230	2F	KF	ADFG	1	1	2	1	1	1	1	5
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	38	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	38	0	0	0	0	0	0	0	0	0	0

\* Started at bluffs about 5 miles upstream of Kwethluk River. \*

Stream: CANYON CREEK

Drainage: KWETHLUK RIVER

Latitude: 601400N

Longitude: 1601500W

```

* 07/20/90      Quality:    1.      Rating:    1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*      273  2F     DM   ADFG     2         1     1       1      1         1         1         15
*
*      INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                   Chinook Chinook  Redd    Chum   Chum   Pink  Pink  Sockeye Sockeye Coho  Coho
*
*      101
*      102
*      103
*      104      91     1         117     0
*      105
*
*      TOTAL      91     1     0         117     0     0     0     0     0     0     0

```

\* According to USGS maps this index objective area is misnamed, it should be Crooked Creek. Crooked Creek is a third order tributary which confluences with the Kwethluk R. Canyon Creek is a fourth order trib. of Crooked Cr. Fish well distributed in the Index area. Survey was discontinued at the confluence of Crooked Cr. and Canyon Cr.; however fish were seen further upstream. Pilot was George Walters, USF&WS.

```

* 08/02/91      Quality:    0.9     Rating:    1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*      304  1F     CB   ADFG     2         1     3       1      1         1         1         10
*
*      INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                   Chinook Chinook  Redd    Chum   Chum   Pink  Pink  Sockeye Sockeye Coho  Coho
*
*      101      184
*      102
*      103
*      104
*      105
*
*      TOTAL      184     0     0         140     0     0     0     0     0     0     0

```

\* USF&WS SuperCub on floats with Chris Christenson pilot. Surveyed 10 miles from confluence of Kwethluk River.

Stream: CANYON CREEK/GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 592000N

Longitude: 1610100W

---

* 07/28/87	Quality:	0.75	Rating:	2									*
* Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	*	
* ---	---	---	---	---	---	---	---	---	---	---	---	*	
* 129	3	KS	ADFG	2	2	2	2	2	2	1	13	*	
* INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	*	
* Chinook	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	*	
* 101	47	0	0	24	0	0	0	0	0	0	0	*	
* 102	0	0	0	0	0	0	0	0	0	0	0	*	
* 103	0	0	0	0	0	0	0	0	0	0	0	*	
* 104	0	0	0	0	0	0	0	0	0	0	0	*	
* 105	0	0	0	0	0	0	0	0	0	0	0	*	
* TOTAL	47	0	0	24	0	0	0	0	0	0	0	*	
* * * * *												*	

---

Stream: CANYON LAKE

Drainage: CANYON CREEK/GOODNEWS RIVER

Latitude: 592600N

Longitude: 1610900W

* 07/28/87 Quality: 0.75 Rating: 2 *														
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
128	3	KS	ADFG	2		2	2	2	2	2	2	3		4
INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	Live	Dead	
	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho			
101	0	0	0	0	0	0	0	0	0	200	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	200	0	0	0	0



Stream: CHEENEETHUK RIVER

Drainage: SWIFT RIVER

Latitude: 614850N

Longitude: 1560030W

```

* 07/23/84      Quality:  0.9      Rating:  1
*
*   Seq Method Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  ----  ---  -----  ----  ---  ---  ---  ---  ---  ---  ---  ---
*    21   6   05   ADFG      2      2      2      1      1      1      2      50
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*           Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*   101           511         0         0         30         0         0         0         0         0         0         0
*   102           666         0         0         0         0         0         0         0         0         0         0
*   103            0         0         0         0         0         0         0         0         0         0         0
*   104            0         0         0         0         0         0         0         0         0         0         0
*   105            0         0         0         0         0         0         0         0         0         0         0
*
*   TOTAL       1177         0         0         30         0         0         0         0         0         0         0

```

\* SURVEY ENDED AT SHOELATHER CREEK.

```

* 07/26/85      Quality:  0.9      Rating:  2
*
*   Seq Method Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  ----  ---  -----  ----  ---  ---  ---  ---  ---  ---  ---  ---
*    94   6   05   ADFG      2      1      1      2      2      1      1      50
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*           Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*   101           927         0         0         30         0         0         0         0         0         0         0
*   102            75         0         0         0         0         0         0         0         0         0         0
*   103            0         0         0         0         0         0         0         0         0         0         0
*   104            0         0         0         0         0         0         0         0         0         0         0
*   105            0         0         0         0         0         0         0         0         0         0         0
*
*   TOTAL       1002         0         0         30         0         0         0         0         0         0         0

```

Stream: CHEENEETNUK RIVER

Drainage: SWIFT RIVER

Latitude: 614850N

Longitude: 1560030W

```

* 07/27/86      Quality:  0.85      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      114   6   DS   ADFG      2      1      1      3      2      1      1      35
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          0        0        0        0        0        0        0        0        0        0        0        0
*      102         110        0        0        0        0        0        0        0        0        0        0        0
*      103          0        0        0        0        0        0        0        0        0        0        0        0
*      104          0        0        0        0        0        0        0        0        0        0        0        0
*      105          0        0        0        0        0        0        0        0        0        0        0        0
*
*      TOTAL      110        0        0        0        0        0        0        0        0        0        0        0
*
* BEGAN AT MOUTH.  RIVER HIGH, TURBID.  AREA 101 UNSURVEYABLE.  AREA 102 POOR SURVEY.  QUIT AT SHOELATHER CREEK.  ELAPSED TIME 22
* MINUTES.

```

```

* 07/26/87      Quality:  0.8      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      132   6   DS   ADFG      1      2      1      2      2      2      1      39
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101         289        0        49        0        0        0        0        0        0        0        0        0
*      102         28        0        2        0        0        0        0        0        0        0        0        0
*      103          0        0        0        0        0        0        0        0        0        0        0        0
*      104          0        0        0        0        0        0        0        0        0        0        0        0
*      105          0        0        0        0        0        0        0        0        0        0        0        0
*
*      TOTAL      317        0        51        0        0        0        0        0        0        0        0        0
*
* Some turbidity (t=3) in lower 8 miles obscured counts.  Surveyed from mouth to shoelather creek.  C-172RG.

```

Stream: CHEENEETNUK RIVER

Drainage: SWIFT RIVER

Latitude: 614850N

Longitude: 1560030W

* 08/04/88 Quality: 0.9 Rating: 3 *														
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
----	---	----	-----	----	---	---	----	----	---	---	----	---	----	---
216	6	DS	ADFG	3		1	2	1		1	2	1		30
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
101		74	4	152		82	0	0	0	0	0	0	0	0
102		29	0	44		0	0	0	0	0	0	0	0	0
103		4	0	6		0	0	0	0	0	0	0	0	0
104		0	0	0		0	0	0	0	0	0	0	0	0
105		0	0	0		0	0	0	0	0	0	0	0	0
TOTAL		107	4	202		82	0	0	0	0	0	0	0	0

\* Began 5 miles above Shoelather Creek, ended at mouth. Rating=3 because of late survey. Many abandoned king redds. Judging by the number of redds, 200 female chinook may have spawned with a total escapement of around 600 chinook. C-172RG. \*

Stream: CHINEEKLUK CREEK

Drainage: HOLOKUK RIVER

Latitude: 612200N

Longitude: 1581900W

```

* 07/27/86      Quality:  0.85      Rating:    2
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom   Sun Angle  Distance
*      ---  ---    ---   ---      ---      ---    ---      ---    ---      ---      ---      ---
*      108   6     DS    ADFG      2         1       1         1       2         3         2         12
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd        Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          6         0         0         0         0         0         0         0         0         0         0
*      102          0         0         0         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL          6         0         0         0         0         0         0         0         0         0         0

```

```

* 07/26/87      Quality:  0.95      Rating:    1
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom   Sun Angle  Distance
*      ---  ---    ---   ---      ---      ---    ---      ---    ---      ---      ---      ---
*      133   6     DS    ADFG      1         1       1         1       1         2         1         15
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd        Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101         20         0         3         0         0         0         0         33         0         0         0
*      102          0         0         0         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL         20         0         3         0         0         0         0         33         0         0         0

```

\* Surveyed from Tevyaraq Lake to the mouth. C-172RG.



* 07/27/87      Quality:    0.85      Rating:      2      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
134	6	DS	ADFG	2	1	1	2	2	2	1	28	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	258	0	40	180	0	0	0	120	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	258	0	40	180	0	0	0	120	0	0	0	

\* Survey began at confluence of Chikulnuk and Gemuk Crdcks. Water is slightly milky colored. Water cleared progressively downstream due to addition of clear water from various creeks. C-172RG. \*

* 07/23/88      Quality:    0.75      Rating:      2      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
210	6	DS	ADFG	2	2	2	2	2	2	1	30	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	1120	5	0	940	12	0	0	170	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	1120	5	0	940	12	0	0	170	0	0	0	

\* Began at mouth, ended at Gemuk Creek. C-172RG. \*

Stream: CRIPPLE CREEK

Drainage: KUSKOKWIM BAY

Latitude: 592500N

Longitude: 1612100W

---

* 07/27/87	Quality:	0.85	Rating:	2									*
* Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	*	
* ---	---	---	---	---	---	---	---	---	---	---	---	*	
* 135	3	KS	ADFG	2	1	1	2	2	2	1	4	*	
* INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	*	
	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	*	
* 101	6	0	0	376	7	0	0	0	0	0	0	*	
* 102	0	0	0	0	0	0	0	0	0	0	0	*	
* 103	0	0	0	0	0	0	0	0	0	0	0	*	
* 104	0	0	0	0	0	0	0	0	0	0	0	*	
* 105	0	0	0	0	0	0	0	0	0	0	0	*	
* TOTAL	6	0	0	376	7	0	0	0	0	0	0	*	
* * * * *													

---

Stream: EEK MIDDLE FORK RIVER

Drainage: EEK RIVER

Latitude: 600800N

Longitude: 1613500W

```

* 07/27/87      Quality: 1.      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  -----  ---  -----  -----  ----  -----  ----  -----  ----  -----  -----
*      161   2F     DH   ADFG      2         1     1         1     1         1     1         1         60
*
*      INDEX      Live  Dead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*                   Chinook Chinook  Redd   Chum  Chum  Pink Pink  Sockeye Sockeye Coho Coho
*
*      101          387    0    0         0    0    0    0    0    0    0    0    0    0
*      102           0    0    0         0    0    0    0    0    0    0    0    0    0
*      103           0    0    0         0    0    0    0    0    0    0    0    0    0
*      104           0    0    0         0    0    0    0    0    0    0    0    0    0
*      105           0    0    0         0    0    0    0    0    0    0    0    0    0
*
*      TOTAL      387    0    0         0    0    0    0    0    0    0    0    0    0

```

\* Survey began at confluence of Eek and Middle Fork Eek Rivers. Excellent survey used USFWS plane and pilot. USFWS observer, Ray Jones, accompanied.

```

* 07/20/90      Quality: 1.      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  -----  ---  -----  -----  ----  -----  ----  -----  ----  -----  -----
*      274   2F     DM   ADFG      2         1     1         1     1         1     1         1         43
*
*      INDEX      Live  Dead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*                   Chinook Chinook  Redd   Chum  Chum  Pink Pink  Sockeye Sockeye Coho Coho
*
*      101          505    0    0         210    0
*      102
*      103
*      104
*
*      TOTAL      505    0    0         210    0    0    0    0    0    0    0    0    0

```

\* Survey begun at the first trib. downstream of the large bend where the Eek Mid Fk flows perpendicular to the Great Ridge (about 5 miles S of northern tip of the Great Ridge). Fish well distributed and spawning in upper reach. Water was very low in the 5 mile section below southern tip of Great Ridge. Looked like there was more volume upstream and finer substrate; only 15 kings. The lower 15 miles of the river (as the crow flies) was heavily discolored due to orange colored iron precipitate. The color mildly obscured vis. in pools; still only 12 fish (kings) were seen in this segment. I do not feel I missed many fish. Pilot was George Walters, USF&WS.

\* 07/23/85      Quality: 0.75      Rating: 2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
72	6	05	ADFG	2	1	3	1	2	3	1	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	530	0	0	280	0	0	0	50	0	0	0
103	376	0	0	75	0	0	0	10	0	0	0
104	212	0	0	101	0	0	0	20	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1118	0	0	456	0	0	0	80	0	0	0

\* START NEAR RAINY CR. STRIP (UNUSEABLE). END 2 MILES ABOVE SO. FK. EEK RIVER CONFLUENCE.

\* 07/23/87      Quality: 0.75      Rating: 2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
136	2F	05	ADFG	2	1	3	1	3	2	1	48
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	42	0	0	0	0	0	0	0	0	0	0
103	107	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	149	0	0	0	0	0	0	0	0	0	0

\* Plane and pilot furnished by USFWS. USFWS observer, Ray Jones, was also aboard. Survey began about four miles above Eek Lake and ended due to dark conditions about three miles into Great Ridge valley.

Stream: EEK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 601200N

Longitude: 1621500W

```

* 07/27/87      Quality:    1.      Rating:    1
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom   Sun Angle  Distance
*      ---  ---    ---   ---     ---        ---    ---      ---     ---     ---     ---     ---
*      137  2F    DH    ADFG      2         1       1        1       1       1       1       1       200
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd        Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0         0
*      102        1183        0         0         0         0         0         0         0         0         0         0         0
*      103         106         1         0         0         0         0         0         0         0         0         0         0
*      104         450         0         0        335         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      1739         1         0        335         0         0         0         0         0         0         0         0
*
* Excellent survey in USFWS C-185 on floats. Area 101 not surveyed.

```

```

* 07/23/88      Quality:    0.9      Rating:    1
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom   Sun Angle  Distance
*      ---  ---    ---   ---     ---        ---    ---      ---     ---     ---     ---     ---
*      207  2F    DS    ADFG      2         1       1        1       2       2       1       1       80
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd        Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101         204         0         0        1990         0        120         0        110         0         0         0         0
*      102        1459         0         0        1722         0         0         0         55         0         0         0         0
*      103         572         1         0        136         0         0         0        139         0         0         0         0
*      104         224         0         0         72         20         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      2459         1         0        3920         20        120         0        304         0         0         0         0
*
* Began at Rainy Creek, ended about 20 miles from mouth. USFWS aircraft - C185 on floats. USFWS pilot, George Walters, and observer, Ray Jones on board.

```

\* 07/18/89      Quality:    0.85      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
243	2F	DM	ADFG	2		1	2	1	2	2	1	35
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	776	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	776	0	0	0	0	0	0	0	0	0	0	0

\* Broke off area 102 at the braided channels about 5 miles upstream of 101 due to poor survey conditions. Missed boundary cues so only a total count is entered. \*

\* 07/25/89      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
242	2F	KF	ADFG	1		1	2	1	2	2	1	35
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	0	0	0
102	180	0	0	0	0	0	0	0	0	0	0	0
103	423	0	0	0	0	0	0	0	0	0	0	0
104	439	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1042	0	0	0	0	0	0	0	0	0	0	0

\* Broke off area 102 at the braided channels about 5 miles upstream of 101 due to poor survey conditions. Missed Eek Lake creek boundary between 103 and 104 so break is approximation made after past the break. 103 count is a little low; 104 a little high. Doug Molyneaux; co-observer. \*

Stream: EEK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 601200N

Longitude: 1621500W

\* 07/20/90      Quality:    1.      Rating:      1

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
275	2F	DM	ADFG	2		1	1	1	1	1	1	47	
INDEX		Live Chinook	Dead Chinook	Chinook Redd		Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101													
102													
103		535	0			2	0						
104		376	0			0	0						
105													
TOTAL		911	0	0		2	0	0	0	0	0	0	0

\* Began at Rainy Cr. airstrip. Began seeing fish immediately. Kings well distributed in river. Most fish are paired up spawning. Low water level. Discontinued survey at the Great Ridge. Fish appeared to be plentiful below that point. Saw with 2 cubs fishing near Great Ridge. Pilot was George Walters, USF&WS.

\* 08/02/91      Quality:    0.9      Rating:      2

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
305	1F	CB	ADFG	2		1	3	1	1	1	2	50	
INDEX		Live Chinook	Dead Chinook	Chinook Redd		Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101													
102		544				520				540			
103		422				500				2090			
104		346				200				1550			
105													
TOTAL		1312	0	0		1220	0	0	0	4180	0	0	0

\* USF&WS SuperCub with Chris Christenson pilot. Started at Rainy Creek and surveyed to about 20 miles below Great Ridge.

Stream: EEK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 601200N

Longitude: 1621500W

```
* 08/30/91      Quality: 1.      Rating: 1 *
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance *
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---    --- *
*      306  IF     CB   ADFG    1          1     1       1      1         1       1         1         60    *
*
*           Live   Dead   Chinook  Live   Dead   Live   Dead   Live   Dead   Live   Dead   Live   Dead *
*           INDEX  Chinook Chinook  Redd   Chum   Chum   Pink  Pink  Sockeye Sockeye Coho  Coho *
*
*           101  ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    --- *
*           102  ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    --- *
*           103  ---    3     ---    ---    ---    ---    ---    ---    ---    ---    ---    --- *
*           104  ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    --- *
*           105  ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    ---    --- *
*
*           TOTAL      3      0      0      0      0      0      0      0      32      0      3289      0 *
*
* USF&WS SuperCub with Chris Christenson pilot. Started at Rainy Creek and ended about 5 miles from confluence with Middle Fork Eek *
* River. Excellent survey conditions. *
*
```



Stream: FOG RIVER

Drainage: TULUKSAK RIVER

Latitude: 610500N

Longitude: 1604500W

---

* 07/28/87	Quality:	0.7	Rating:	3									*		
* Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance	*
* 138	3	KF	ADFG	1		1	1	3		3	3	1		20	*
* INDEX		Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead			*
* Chinook		Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho			*
* 101		10	0	0	5	0	0	0	0	0	0	0	0	0	*
* 102		0	0	0	0	0	0	0	0	0	0	0	0	0	*
* 103		0	0	0	0	0	0	0	0	0	0	0	0	0	*
* 104		0	0	0	0	0	0	0	0	0	0	0	0	0	*
* 105		0	0	0	0	0	0	0	0	0	0	0	0	0	*
* TOTAL		10	0	0	5	0	0	0	0	0	0	0	0	0	*
* Surveyed from headwaters to major fork below foothills.															

---

Stream: GAGARYAH RIVER

Drainage: SWIFT RIVER

Latitude: 613715N

Longitude: 1553840W

\* 07/26/87      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
----	----	----	----	----	----	----	----	----	----	----	----
140	6	DS	ADFG	1	2	1	1	1	1	10	31
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	205	0	1	0	0	0	0	0	0	0	0
102	0	0	12	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	205	0	13	0	0	0	0	0	0	0	0

\* Excellent survey conditions throughout survey. C-172RG.

\* 08/04/88      Quality:    0.95      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
----	----	----	----	----	----	----	----	----	----	----	----
217	6	DS	ADFG	3	1	2	1	1	1	1	20
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	123	11	100	0	0	0	0	0	0	0	0
102	18	0	23	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	141	11	123	0	0	0	0	0	0	0	0

\* Began at mouth, ended at upstream boundary of 102. Number of redds suggests that 120 female chinook may have spawned with a total escapement of about 370 chinook. C-172RG.

Stream: GOODNEWS LAKE

Drainage: GOODNEWS RIVER

Latitude: 593000N

Longitude: 1613100W

```
* 08/01/85      Quality: 0.7      Rating: 3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  -  ---  -  -  -  -  -  -  -  -  -  -
*      63   6     DS   ADFG     2        3     3        1     3        1        2        15
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
*      101          0        0        0        0        0        0        0        0        1723      10        0        0
*      102          0        0        0        0        0        0        0        0        0        0        0        0
*      103          0        0        0        0        0        0        0        0        0        0        0        0
*      104          0        0        0        0        0        0        0        0        0        0        0        0
*      105          0        0        0        0        0        0        0        0        0        0        0        0
*
*      TOTAL          0        0        0        0        0        0        0        0        1723      10        0        0
*
* MODERATE WIND AND OVERCAST OBSCURRED COUNTS.
```

```
* 08/01/85      Quality: 0.75     Rating: 2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  -  ---  -  -  -  -  -  -  -  -  -  -  -
*      64   6     KS   ADFG     2        2     3        1     2        2        2        15
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -
*      101          0        0        0        0        0        0        0        0        3200      0        0        0
*      102          0        0        0        0        0        0        0        0        0        0        0        0
*      103          0        0        0        0        0        0        0        0        0        0        0        0
*      104          0        0        0        0        0        0        0        0        0        0        0        0
*      105          0        0        0        0        0        0        0        0        0        0        0        0
*
*      TOTAL          0        0        0        0        0        0        0        0        3200      0        0        0
*
* SEE GOODNEWS R. SURVEY SAME DATE, SAME OBSERVER (KS).
```

Stream: GOODNEWS LAKE

Drainage: GOODNEWS RIVER

Latitude: 593000N

Longitude: 1613100W

```

* 07/26/86      Quality: 0.9      Rating: 1
*
*   Seq Method Obs Agency   Spawn Stg   Wind   Weather   Water   Water Vis.   Bottom   Sun Angle   Distance
*   --- --- --- ---      ---      ---    ---      ---      ---      ---      ---      ---
*   110  6   DS   ADFG      2         2       1        1        1        2         1         10
*
*           Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*           INDEX  Chinook Chinook   Redd   Chum   Chum   Pink   Pink   Sockeye Sockeye   Coho   Coho
*
*   101           0     0     0         0     0     0     0     0     0     0     0
*   102           0     0     0         0     0     0     0     0     0     0     0
*   103           0     0     0         0     0     0     0     0     0     0     0
*   104           0     0     0         0     0     0     0     0     0     0     0
*   105           0     0     0         0     0     0     0     0     0     0     0
*
*   TOTAL           0     0     0         0     0     0     0     0     3190  0     0
*
* SEE GOODNEWS RIVER COMMENTS; SAME DATE.

```

```

* 07/15/88      Quality: 0.9      Rating: 2
*
*   Seq Method Obs Agency   Spawn Stg   Wind   Weather   Water   Water Vis.   Bottom   Sun Angle   Distance
*   --- --- --- ---      ---      ---    ---      ---      ---      ---      ---      ---
*   193  6   DS   ADFG      1         2       1        1        1        2         1         5
*
*           Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*           INDEX  Chinook Chinook   Kedd   Chum   Chum   Pink   Pink   Sockeye Sockeye   Coho   Coho
*
*   101           0     0     0         0     0     0     0     0     0     0     0
*   102           0     0     0         0     0     0     0     0     0     0     0
*   103           0     0     0         0     0     0     0     0     0     0     0
*   104           0     0     0         0     0     0     0     0     0     0     0
*   105           0     0     0         0     0     0     0     0     0     0     0
*
*   TOTAL           0     0     0         0     0     0     0     0     4399  0     0
*
* C-172RG.

```

Stream: GOODNEWS LAXE

Drainage: GOODNEWS RIVER

Latitude: 596000N

Longitude: 1613100W

\* 08/03/88      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
218	6	KF	ADFG	1	2	3	1	1	1	1	5
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	4550	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	4550	0	0	0

\* D7/25/89      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
239	6	DS	ADFG	1	1	1	1	1	2	1	5
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	2520	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2520	0	0	0	0	0	0	0	0	0	0

\* C-207. Entire lakeshore and lower 1/4 mile of inlet stream. \*

Stream: GOODNEWS LAKE

Drainage: GOODNEWS RIVER

Latitude: 593000N

Longitude: 1613100W

\* 08/15/89      Quality:      0.8      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
247	3	CB	ADFG	2	2	2	2	2	1	1	17
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	8600	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	8600	0	0	0

\* Missed fair number (50%) in inlet to lake.

\* 08/15/89      Quality:      0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
253	3	DM	ADFG	2	2	2	2	2	1	1	17
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	5775	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	5775	0	0	0

\* Sockeye survey. Riffles on lake had adverse effect on visability. Saw 2850 sockeye in lake; 2925 in tributary. Surveyed entire lake system & tributaries.

Stream: GOODNEWS LAKE

Drainage: GOODNEWS RIVER

Latitude: 593000N

Longitude: 1613100W

---

* 08/02/90	Quality:	0.9	Rating:	2									*
* Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	*	
* ---	---	---	---	---	---	---	---	---	---	---	---	*	
* 276	3	CA	ADFG	2	2	1	1	2	1	2	5	*	
* INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	*	
	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	*	
* 101	0	0	0	0	0	0	0	21900	0	0	0	*	
* 102												*	
* 103												*	
* 104												*	
* 105												*	
* TOTAL	0	0	0	0	0	0	0	0	21900	0	0	0	*
* Most fish in large balls offshore.													

---

\* 07/31/84      Quality:    1.25      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
41	10	KS	ADFG	0		0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	3260	0	0	19003	0	13744	0	32053	0	249	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	3260	0	0	19003	0	13744	0	32053	0	249	0	

\* TOWER PROJECT WAS OPERATIONAL FROM JUNE 15 - JULY 31. ESTIMATED ESCAPEMENTS ARE EXPANDED SEASON TOTAL TOWER COUNTS. THE PROJECT WAS TERMINATED TOO EARLY TO PROPERLY ASSESS THE COHO OR PINK SALMON ABUNDANCE. \*

\* 07/31/85      Quality:    1.25      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
260	10	KS	ADFG	0		0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	2831			10367		144		24131				
102												
103												
104												
105												
TOTAL	2831	0	0	10367	0	144	0	24131	0	0	0	

\* Tower operational 6/27 - 7/31. \*

\* 07/24/86      Quality:    1.25      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
123	10	KS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	2083	0	0	14756	0	0	0	51069	0	163	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2083	0	0	14756	0	0	0	51069	0	163	0

\* THE PROJECT OPERATED FROM JUNE 16 THROUGH JULY 24, 1986. BUDGET CONSIDERATIONS RESULTED IN AN EARLIER THAN SCHEDULED TERMINATION DATE. BASED ON THE HISTORICAL (1981-1985) AVERAGE TIMING DATA, THIS RESULTED IN 89% COUNT OF CHINOOK, 99% COUNT OF SOCKEYE, AND 84% COUNT OF CHUM SALMON. \*

\* 07/30/87      Quality:    1.25      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
261	10	KS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	2274			17519		64		28871			
102											
103											
104											
105											
TOTAL	2274	0	0	17519	0	64	0	28871	0	0	0

\* Tower operational 6/22 - 7/30. \*

\* 07/30/88      Quality:    1.25      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
262	10	CB	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	2712			20799		6781		15799			
102											
103											
104											
105											
TOTAL	2712	0	0	20799	0	6781	0	15799	0	0	0

\* Tower operational 6/23 - 7/30. \*

\* 07/29/89      Quality:    1.25      Rating:      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
299	10	CB	ADFG								
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1915			10360		246		21166			
102											
103											
104											
105											
TOTAL	1915	0	0	10360	0	246	0	21166	0	0	0

\* Tower operational from 6/29 to 7/31. Pink and coho count incomplete since project terminates before peak passage times of these species. \*

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```

* 07/24/90      Quality: 1.25      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Oistance
*      ----  -----  ---  -----  ----  ---  ----  ----  ----  ----  ----  ----
*      297   10    CA   ADFG
*
*            Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*            INDEX  Chinook  Chinook   Redd   Chum   Chum   Pink   Pink   Sockeye  Sockeye  Coho   Coho
*
*            101      3636              6410              3378              31679              0
*            102
*            103
*            104
*            105
*
*            TOTAL      3636      0      0      6410      0      3378      0      31679      0      0      0
*
* Tower operational from 6/19 to 7/24. Pink and coho count incomplete since project terminated before peak passage times of these species.
*

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* 08/25/91      Quality:   1.25      Rating:      1
*
*      Seq  Method  Obs   Agency   Spawn Stg  Wind   Weather   Water   Water Vls.  Bottom  Sun Angle  Distance
*      ---  -----  ---  -----  -----  ---   ---      ---   ---        ---    ---      ---
*      323   11     CA    ADFG
*
*      INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                      Chinook Chinook   Redd   Chum   Chum   Pink  Pink  Sockeye Sockeye Coho   Coho
*
*      101          2147
*      102
*      103
*      104
*      105
*
*      TDTAL      2147      0      0      27525      0      1694      0      47397      0      1694      0
*
* Weir operational from 6/29 to 8/25. Coho count incomplete since project ended before peak of this species migration.
*

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\* 07/11/84      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
40	6	OS	ADFG	1	2	3	1	1	1	1	20
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	5	0	0	0	0	0	0	0	0	0	0
102	1535	0	0	0	0	0	0	0	0	0	0
103	115	0	0	0	0	0	0	0	0	0	0
104	100	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1755	0	0	0	0	0	0	0	0	0	0

\* ALL LAKES EXCEPT NORTH LAKE (101, 102) SURVEYED. \*

\* 07/11/84      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
44	6	KS	ADFG	1	1	4	1	1	1	1	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	12	0	0	0	0	0	0	975	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	200	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12	0	0	0	0	0	0	1175	0	0	0

\* SEE MIDDLE FORK GOODNEWS RIVER SURVEY, SAME DATE, SAME OBSERVER (KS). \*

Stream: GOODNEWS MIDDLE FORK LAKES

Drainage: MIDDLE FORK GOODNEWS RIVER

Latitude: 592400N

Longitude: 1603600W

\* 07/27/84      Quality:    0.95      Rating:      1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
46	6	XF	ADFG	2	1	2	1	1	1	1	35
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	287	0	0	0	0	0	0	622	0	0	0
102	36	2	0	0	0	0	0	6450	1	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	323	2	0	0	0	0	0	7072	1	0	0

\* 102 INCLUDES 103, 104 AND 105. OBSERVER DID NOT KNOW INDEX AREAS.

\* 07/25/85      Quality:    0.9      Rating:      2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
82	6	KS	ADFG	1	2	2	1	1	1	2	90
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	208	0	0	30	0	0	0	175	0	0	0
102	0	0	0	0	0	0	0	6375	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	190	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	208	0	0	30	0	0	0	6740	0	0	0

\* SEE MIDDLE FORK GOODNEWS RIVER SURVEY, SAME DATE AND OBSERVER (KS).

\* 08/01/85      Quality:    0.6      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
71	6	05	ADFG	2	3	3	3	3	1	2	10
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	2455	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	2455	0	0	0

\* THUNDERSTORM IN PROGRESS DURING SURVEY. \*

\* 08/01/85      Quality:    0.9      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
70	6	KS	ADFG	2	2	2	1	1	1	1	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	7	0	0	0	0	0	0	4900	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7	0	0	0	0	0	0	4900	0	0	0

\* CLOUDY WITH RAIN. POOR SURVEY CONDITIONS. C-172RG. \*

Stream: GOODNEWS MIDDLE FORK LAKES

Drainage: MIDDLE FORK GOODNEWS RIVER

Latitude: 592400N

Longitude: 1603600W

\* 09/04/85      Quality:    0.75      Rating:      2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
78	8	FD	ADFG	3	2	2	2	2	2	1	6
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	3000	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	3000	0	0	0

\* FRED DECICCO, SF DIV., FLOAT TRIP. FEW CHINOOK, SOCKEYE SPAWNING ON MARGIN OF KUKAKTLIM L. AND IN FIRST 1/4 MILE OF OUTLET.

\* 07/26/86      Quality:    0.95      Rating:      1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
113	6	OS	ADFG	1	1	1	1	1	2	1	10
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	8540	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	8540	0	0	0

\* KUKAKTLIM LAKE AND THREE LAKES TWO MILES WEST OF OUTLET.

Stream: GOODNEWS MIDDLE FORK LAKES

Drainage: MIDDLE FORK GOODNEWS RIVER

Latitude: 592400N

Longitude: 1603600W

\* 07/28/87      Quality:    0.9      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
179	6	DS	ADFG	2	1	1	2	1	2	1	86
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	2114	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	877	0	0	0
104	0	0	0	0	0	0	0	6657	0	0	0
105	0	0	0	0	0	0	0	14832	0	0	0
TOTAL	0	0	0	0	0	0	0	24480	0	0	0

\* 07/28/87      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
163	3	KS	ADFG	2	2	2	2	2	2	1	25
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	980	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	421	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	865	0	0	0
TOTAL	0	0	0	0	0	0	0	2266	0	0	0

Stream: GOODNEWS MIDDLE FORK LAKES

Drainage: MIDDLE FORK GOODNEWS RIVER

Latitude: 592400N

Longitude: 1603600W

\* 08/21/87      Quality:    0.95      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
166	6	DS	ADFG	3	2	1	1	1	1	1	25
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	5405	3900	0	0
TOTAL	0	0	0	0	0	0	0	5405	3900	0	0

\* Spawn stage: sockeye=3. Survey rating=3 due to lateness for sockeye.

\* 07/15/88      Quality:    0.95      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
195	6	DS	ADFG	1	2	1	1	1	1	1	20
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	155	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	400	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	2101	0	0	0
TOTAL	0	0	0	0	0	0	0	2656	0	0	0

\* C-172RG.

\* 07/25/89      Quality:    1.      Rating:      1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
241	6	OS	ADFG	1	1	1	1	1	1	1	20
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	6899	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	6899	0	0	0

\* Total includes counts in map indexes 103, 104, 105, 106, 107. C-207.

\* 08/15/89      Quality:    0.8      Rating:      1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
250	3	CB	ADFG	2	2	2	2	2	1	2	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	2800	0	0	0
102	0	0	0	0	0	0	0	2950	0	0	0
103	0	0	0	0	0	0	0	7000	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	12750	0	0	0

\* 101 North Lake \*\*\* 102 South Lake \*\*\* 103 Kukaktilim Lake.

Stream: GOODNEWS MIDDLE FORK LAKES

Drainage: MIDDLE FORK GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 08/15/89      Quality:    0.8      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
251	3	OM	ADFG	2	2	2	1	2	2	1	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	8000	0	0	0
102	0	0	0	0	0	0	0	5010	0	0	0
103	0	0	0	0	0	0	0	17314	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	30324	0	0	0

\* North Lake & tributaries designated index area 101. South Lake & tributaries designated index area 102. Kukaktim Lake & tributaries designated index area 103. Surveyed entire lake & tributaries.

\* 08/02/90      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
277	3	CA	ADFG	2	2	1	1	2	1	2	5
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	200	0	0	0
102											
103											
104											
105											
TOTAL	0	0	0	0	0	0	0	200	0	0	0

\* Very turbulant - hard to keep plane on course - light was beginning to fade.

\* 07/11/84      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
42	6	DS	ADFG	1	2	3	1	2	2	1	80
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	161	0	0	1019	0	1490	0	1068	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	285	0	0	0
104	65	0	0	0	0	60	0	206	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	226	0	0	1019	0	1550	0	1559	0	0	0

\* BEGAN AT MOUTH; SURVEYED COMPLETE INDEX AREAS, EXCEPT AREA 102 - DID NOT SURVEY. LAKES REPORTED SEPARATELY. \*

\* 07/11/84      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
43	6	KS	ADFG	1	1	4	1	1	1	1	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	554	0	0	0	0	0	0	175	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	2	0	0	0	0	0	0	125	0	0	0
104	114	0	0	0	0	0	0	100	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	670	0	0	0	0	0	0	400	0	0	0

\* SURVEY BEFORE PEAK. MOST REDS AND CHUMS ON LOWER END OF THE DRAINAGE AND MIXED. DIFFICULT TO SEPARATE CHUMS AND SOCKEYE. WATER LEVEL EXTREMELY LOW. ONLY A PARTIAL COUNT FOR SOCKEYE. DID NOT COUNT CHUMS. \*

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

```

* 07/27/84      Quality: 0.95      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      45   6    KF   ADFG     2        1        2        1        1        1        1        35
*
*      INDEX      Live  Oead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*      INDEX      Chinook  Chinook  Redd  Chum  Chum  Pink  Pink  Sockeye  Sockeye  Coho  Coho
*
*      101      679      81      0      10041      0      0      0      0      0      0      0
*      102      0      0      0      0      0      0      0      500      0      0      0
*      103      134      11      0      187      0      0      0      973      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      813      92      0      10228      0      0      0      1473      0      0      0

```

\* BROWN BEAR IN 103. 102 LOWER 4 MILES WAS DRY DUE TO LOW WATER CONDITIONS PREVENTING LATER RUN FISH ACCESS TO LAKE. KING SPAWN STAGE 2, CHUM 1, SOCKEYE 1.

```

* 07/25/85      Quality: 0.9      Rating: 2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      81   6    KS   ADFG     1        2        2        1        1        1        2        90
*
*      INDEX      Live  Oead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*      INDEX      Chinook  Chinook  Redd  Chum  Chum  Pink  Pink  Sockeye  Sockeye  Coho  Coho
*
*      101      621      0      0      1750      0      0      0      311      0      0      0
*      102      0      0      0      0      0      0      0      15      0      0      0
*      103      40      0      0      0      0      0      0      335      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      661      0      0      1750      0      0      0      661      0      0      0

```

\* CLEAR FOR 80 PERCENT OF THE LOWER RIVER. 50 PERCENT CLOUD COVERAGE IN UPPER PORTION OF THE RIVER. STRONG SW WINDS AT 20-25 MPH. SURVEY CONDITIONS FAIR. C-172RG. PILOT PDOR.

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 08/01/85      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
80	6	DS	ADFG	3	2	2	1	2	2	2	55
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1465	0	0	3353	0	0	0	255	0	112	0
102	0	0	0	0	0	0	0	0	0	0	0
103	585	0	0	240	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2050	0	0	3593	0	0	0	255	0	112	0

\* GOOD SURVEY BELOW KUKTLIM CR. FAIR SURVEY TO LAKES. \*

\* 08/01/85      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
69	6	KS	ADFG	2	2	2	1	1	1	1	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1344	0	0	4180	0	0	0	315	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	433	0	0	220	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1777	0	0	4400	0	0	0	315	0	0	0

\* THE MIDDLE AND LOWER PORTIONS OF THE RIVER WAS CLEAR SKYS AND EXCELLENT SURVEY CONDITIONS. THE UPPER PORTION OF RIVER WAS CLOUDY: FAIR SURVEY CONDITIONS. C-172RG \*

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

* 09/04/85      Quality: 0.75      Rating: 2												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
77	8	FD	ADFG	3	2	2	2	2	2	1	45	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	11	0	0	2	0	0	0	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	11	0	0	2	0	0	0	0	0	0	

\* FLOAT TRUP BY FRED DECICCO, SF DIV., AUG27-SEP4. FEW LIVE CHINDOK, SOCKEYE SPAWNING ON MARGIN OF KUKAKTLIM L. AND IN FIRST 1/4 MILE OF OUTLET. COHO NOT SPAWNING YET: NO COUNT BUT PRESENT FROM 1 MILE BELOW LAKE DOWN - COMMON BUT NOT NUMERDUS.

* 07/26/86      Quality: 0.9      Rating: 2												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
112	6	DS	ADFG	2	1	1	1	2	2	1	50	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	655	0	0	7460	0	500	0	8410	0	4400	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	594	0	0	185	0	0	0	40	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	1249	0	0	7645	0	500	0	8450	0	4400	0	

\* 70 CHINOOK COUNTED BELOW TOWER SITE. 2775 SDCKEYE BELOW TOWER. 4000 COHO BELOW TOWER. 2100 CHUM BELOW TOWER. BEGAN AT MOUTH; ENDED AT KUKAKTLIM L.

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 07/27/86 Quality: 1. Rating: 2 \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
103	3	XS	ADFG	2	1	1	1	1	1	1	12
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	230	0	0	515	0	0	0	2400	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	230	0	0	515	0	0	0	2400	0	0	0

\* SURVEY WAS TO ENUMERATE THE SALMON BETWEEN THE CURRENT TOWER SITE AND THE PROPOSED NEW TOWER SITE, AN ADDITIONAL 12 MILES UP RIVER. PINK SALMON WERE NOT ENUMERATED. \*

\* 07/26/87 Quality: 0.75 Rating: 3 \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
165	3	KF	ADFG	1	1	1	3	3	2	1	48
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	188	0	0	1641	0	0	0	1595	0	0	0
102	0	0	0	0	0	0	0	1225	0	0	0
103	0	0	0	0	0	0	0	269	0	0	0
104	59	0	0	411	0	0	0	265	0	0	0
105	0	0	0	0	0	0	0	3416	0	0	0
TOTAL	247	0	0	2052	0	0	0	6770	0	0	0

\* Downstream of tower: 21 chinook, 200 sockeye and 600 chum. Sockeye count rating=2 since they were in shallow spawning streams and were highly colored. Water color matched chinook and chum resulting in rating=3 for those species. \*

Stream: GDDNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 07/28/87      Quality:    0.9      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
162	6	DS	ADFG	2	1	1	2	1	2	1	86
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1580	12	0	7506	73	520	0	1588	0	2420	0
102	0	0	0	0	0	0	0	0	0	0	0
103	135	0	0	265	0	0	0	533	0	0	0
104	492	3	0	1925	20	0	0	870	20	0	0
105	0	0	0	0	0	0	0	21489	5	0	0
TOTAL	2207	15	0	9696	93	520	0	24480	25	2420	0

\* Most chinook still dark and in good condition. Spawn stage: chinook=2, chum=3, sockeye=1, coho=1. C-172R6. \*

\* 07/28/87      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
164	3	KS	ADFG	2	2	2	2	2	2	1	75
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1170	5	0	2554	201	0	0	690	0	0	0
102	3	0	0	6	0	0	0	0	0	0	0
103	94	0	0	5	0	0	0	95	0	0	0
104	331	0	0	240	0	0	0	75	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1598	5	0	2805	201	0	0	860	0	0	0

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 08/21/87      Quality:    0.95      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
167	6	DS	ADFG	1	2	1	1	1	1	1	52
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	65	20	0	0	0	0	0	473	0	5343	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	9	7	0	0	0	0	0	0	0	113	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	74	27	0	0	0	0	0	473	0	5456	0

\* Fair survey is a week too early for peak counts. Began at mouth: ended at lakes above Kukaktlim Creek. C-172R6. \*

\* 07/15/88      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
194	6	DS	ADFG	1	2	1	1	1	2	1	40
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	718	0	0	5628	0	0	0	2755	0	0	0
102	42	0	0	20	0	0	0	143	0	0	0
103	71	0	0	78	0	0	0	257	0	0	0
104	193	0	0	88	0	0	0	20	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1024	0	0	5814	0	0	0	3175	0	0	0

\* Below tower: chinook=160, sockeye=1600, chum=2600. Began at mouth, ended at lakes. C-172R6. \*

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 07/25/89      Quality: 0.85      Rating: 1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
240	6	DS	ADFG	2	2	2	1	1	2	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	954	0	0	2587	0	150	0	950	0	300	0
102	0	0	0	0	0	0	0	0	0	0	0
103	32	0	0	5	0	0	0	10	0	0	0
104	291	0	0	330	0	0	0	185	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1277	0	0	2922	0	150	0	1145	0	300	0

\* C-207. Begin at mouth; survey entire river index except area 102.

\* 08/15/89      Quality: 0.8      Rating: 2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
249	3	CB	ADFG	3	2	2	2	2	1	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	50	0	50	0	0	0	0	170	0	520	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	25	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	0	50	0	0	0	0	170	0	520	0

\* Glare bad in lower river - missed some coho. Redd count not accurate.

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

\* 08/15/89      Quality:    0.75      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
252	3	DM	ADFG	2	2	2	2	2	2	1	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	17	0	0	0	0	0	0	55	0	819	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	1	0	0	0	0	0	0	3	0	7	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	18	0	0	0	0	0	0	58	0	826	0

\* Sockeye survey. Coho well before peak. Sockeye at peak. Chinook past peak. Surveyed entire stream. \*

\* 08/02/90      Quality:    0.8      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
278	3	CA	ADFG	2	3	2	1	2	1	2	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	38	0	0	311	56	34	0	1092	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103											
104											
105											
TOTAL	38	0	0	311	56	34	0	1092	0	0	0

\* Only partial survey due to darkness and turbulence. \*

Stream: GOODNEWS MIDDLE FORK RIVER

Drainage: GOODNEWS RIVER

Latitude: 590800N

Longitude: 1612900W

* 10/03/90 Quality: 1. Rating: 3 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
----	---	----	-----	----	----	----	----	----	----	----	----	
281	1	MJL	USFW		1	1	1	1	1	2	60	
			Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	
	INDEX		Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Live Coho
												Dead Coho
	101									280		
	102									10		
	103									377		
	104									226		
	105											
	TOTAL		0	0	0	0	0	0	0	0	893	0
* This observer reported observing 140 char. *												

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

\* 07/11/84      Quality: 0.85      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	6	DS	ADFG	1		2	3	1	1	1	1	1		80
	INDEX	Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
	101	478	0	0		2035	0	1200	0	1990	0	0	0	
	102	102	0	0		167	0	55	0	588	0	0	0	
	103	8	0	0		0	0	25	0	220	0	0	0	
	104	0	0	0		0	0	0	0	2975	0	0	0	
	105	0	0	0		0	0	0	0	0	0	0	0	
	TOTAL	588	0	0		2202	0	1280	0	5773	0	0	0	

\* SURVEY BEGAN AT GOODNEWS LAKE AND ENDED AT RIVER MOUTH. \*

\* 07/11/84      Quality: 0.85      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	6	KS	ADFG	1		1	4	1	1	1	1	1		80
	INDEX	Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
	101	544	0	0		0	0	0	0	4350	0	0	0	
	102	266	0	0		0	0	0	0	650	0	0	0	
	103	0	0	0		0	0	0	0	175	0	0	0	
	104	0	0	0		0	0	0	0	1600	0	0	0	
	105	0	0	0		0	0	0	0	0	0	0	0	
	TOTAL	810	0	0		0	0	0	0	6775	0	0	0	

\* SURVEY BEFORE PEAK. MOST SOCKEYE AND CHUMS IN THE LOWER END OF THE RIVER AND MIXED. DIFFICULT TO SEPARATE SOCKEYE AND CHUMS APART. WATER LEVEL EXTREMELY LOW. DID NOT COUNT CHUMS. SURVEYED ENTIRE RIVER. \*

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

```

* 07/27/84      Quality:  0.95      Rating:    1
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*    24    6    KF   ADFG      2      1      2      1      1      1      1      80
*
*           Live    Dead    Chinook    Live    Dead    Live    Dead    Live    Dead    Live    Dead
*          INDEX  Chinook  Chinook    Redd    Chum    Chum    Pink    Pink    Sockeye  Sockeye  Coho    Coho
*
*          101      366      0      0      24481      0      0      0      0      0      0      0
*          102      1033     25      0      3176      0      0      0      70      0      0      0
*          103      603     35      0      467      0      0      0      52      0      0      0
*          104      0      0      0      0      0      0      0      12685  0      0      0
*          105      0      0      0      0      0      0      0      0      0      0      0
*
*          TOTAL      2002     60      0      28124      0      0      0      12807  0      0      0

```

\* 104 ONE BROWN BEAR. 104 IS GOODNEWS LAKE AND INLET STREAM. KINGS AT SPAWN STAGE 2, CHUM 1, SOCKEYE 1.\*\*

```

* 08/26/84      Quality:  0.75      Rating:    3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*    25    6    OS   ADFG      1      2      3      1      2      2      1      70
*
*           Live    Dead    Chinook    Live    Dead    Live    Dead    Live    Dead    Live    Dead
*          INDEX  Chinook  Chinook    Redd    Chum    Chum    Pink    Pink    Sockeye  Sockeye  Coho    Coho
*
*          101      0      0      0      0      0      0      0      0      0      32670  0
*          102      52      0      0      0      0      0      0      0      0      9520   0
*          103      0      0      0      0      0      0      0      100     0      1735   0
*          104      0      0      0      0      0      0      0      0      0      0      0
*          105      0      0      0      0      0      0      0      0      0      0      0
*
*          TOTAL      52      0      0      0      0      0      0      100     0      43925  0

```

\* COHO SURVEY RATED POOR BECAUSE TOO EARLY; DOTHERWISE FAIR. SURVEYED FROM GOODNEWS LAKE TO MOUTH.

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

\* 09/04/84      Quality:      1      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
26	1	KF	ADFG	0	1	1	1	1	1	1	80
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	4001	0	0	0	0	0	11880	0
102	4	0	0	100	0	1000	0	0	0	4488	0
103	0	0	0	0	0	0	0	11	0	5090	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	4	0	0	4101	0	1000	0	11	0	21458	0

\* THE TAIL WIND HAD A SLIGHTLY ADVERSE EFFECT ON SURVEY SINCE WE MISSED SOME TIGHT TURNS. THE RIVER IS BEST DESCRIBED AS LITTERED WITH CARCASSES. THEY WERE EVERYWHERE. \*

\* 07/25/85      Quality:      0.8      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
83	6	KS	ADFG	1	3	3	1	1	1	2	80
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	176	0	0	2875	0	0	0	0	0	0	0
102	88	0	0	550	0	0	0	45	0	0	0
103	88	0	0	5	0	0	0	67	0	0	0
104	0	0	0	0	0	0	0	2468	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	352	0	0	3430	0	0	0	2580	0	0	0

\* STRONG SW WINDS OF 20-25 MPH AFFECTED COUNTS. LOWERE PORTION OF RIVER CLEAR, UPPER PORTION (35%) HAD 90 PERCENT CLOUD COVER. COMBINED WITH A POOR PILOT MADE SURVEY POOR. \*

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

\* 08/01/85      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
62	6	DS	ADFG	2	2	3	1	2	2	2	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	810	0	0	1080	0	0	0	150	0	70	0
102	2358	0	0	3080	0	0	0	797	0	0	0
103	367	0	0	255	0	0	0	473	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3535	0	0	4415	0	0	0	1420	0	70	0

\* LOWER RIVER WAS SURVEYED UNDER OPTIMUM CONDITIONS. UPPER RIVER WAS CLOUDY WITH SEVERAL AREAS OF RAIN SHOWERS. \*

\* 08/01/85      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
61	6	KS	ADFG	2	2	3	1	2	2	2	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	296	0	0	640	0	0	0	0	0	0	0
102	1624	0	0	1920	0	0	0	175	0	0	0
103	353	0	0	0	0	0	0	285	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2273	0	0	2560	0	0	0	460	0	0	0

\* UPPER PORTION OF RIVER AND LAKES WAS SURVEYED UNDER POOR TO FAIR CONDITIONS. LOWER PORTION OF RIVER UNDER EXCELLENT CONDITIONS. C-172RG. \*

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

\* 07/26/86 Quality: 0.9 Rating: 2 \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
111	6	DS	ADFG	2	2	1	1	2	1	1	80
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	155	0	0	8750	0	200	0	2880	0	6300	0
102	613	0	0	1300	0	50	0	1750	0	0	0
103	300	0	0	1800	0	0	0	1140	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1068	0	0	11850	0	250	0	5770	0	6300	0

\* BEGAN AT LAKE; ENDED AT BAY. \*

\* 07/26/87 Quality: 0.75 Rating: 3 \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
143	3	KF	ADFG	1	1	1	3	3	2	1	36
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	267	2	0	2982	0	0	0	300	0	0	0
102	37	5	0	2380	0	0	0	262	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	10330	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	304	7	0	5362	0	0	0	10892	0	0	0

\* Area 102 and 103 were counted together and reported as 102. 104 is Goodnews Lake and its inlet creek. Sockeye count is fair (2) due to their color and distribution in shallow spawning streams. Suspect many may still be in lake. Water color obscured chinook and chum salmon; therefore, survey poor (3) for those species. \*

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

```

* 07/28/87      Quality: 0.9      Rating: 1
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   142   6      05   ADFG      2          2        1        1        1          2          1          78
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*             Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*   101      1050      10        0        7425      1320      0        0        741      0        3595      0
*   102      1008      0         0        2675      20        0        0        1978     0        120       0
*   103      176       0         0        2003      0         0        0        2623     0         0         0
*   104      0         0         0         0         0         0        0        14446    0         0         0
*   105      0         0         0         0         0         0        0         0         0         0         0
*
*   TOTAL      2234      10        0        12103     1340      0         0        19786    0        3715      0

```

\* Most chinook still dark and in good shape. Spawn stage: chum=3, chinook=2, sockeye=1. C-172RG.

```

* 08/21/87      Quality: 0.95     Rating: 2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   141   6      05   ADFG      1          2        1        1        1          1          1          52
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*             Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*   101      236      57        0         0         0        100      0        310      300      10365    0
*   102      29       20        0         0         0         0        0        20       0        498     0
*   103      7         1         0         0         0         0        0        685      30       259     0
*   104      0         0         0         0         0         0        0        5387     900      0         0
*   105      0         0         0         0         0         0        0         0         0         0         0
*
*   TOTAL      272      78        0         0         0        100      0        6402     1230     11122    0

```

\* Fair survey is a week too early for peak count. Began Goodnews Lake: ended at mouth. C-172RG.

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 590700N

Longitude: 1613500W

\* 07/15/88      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
192	6	OS	ADFG	1	2	1	1	1	2	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	273	0	0	2220	0	275	0	995	0	0	0
102	173	0	0	310	12	0	0	317	0	0	0
103	38	0	0	360	0	0	0	169	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	484	0	0	2890	12	275	0	1481	0	0	0

\* Clear, sunny. Survey rated 2 because spawn stage=1. Began at Goodnews Lake and ended at mouth. C-172RG. \*

\* 08/03/88      Quality:    0.55      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
219	6	KF	ADFG	2	3	4	1	4	2	1	25
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	184	7	0	50	3	0	0	0	0	0	0
102	135	53	0	1250	53	0	0	300	0	0	0
103	318	36	0	2546	36	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	637	96	0	3846	92	0	0	300	0	0	0

\* Overcast made survey poor. Many large chum spawning areas could be seen but lack of light obscured the fish. C-172RG. \*

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 590700N

Longitude: 1613500W

\* 07/25/89      Quality:    0.9      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
238	6	DS	ADFG	2	2	1	1	1	2	1	75
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	215	0	0	850	0	200	0	315	0	650	0
102	368	0	0	510	0	0	0	410	0	0	0
103	68	0	0	80	0	0	0	360	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	651	0	0	1440	0	200	0	1085	0	650	0

\* C-207. Began at Goodnews Lake; ended at mouth. Charlie Burkey: co-observer. \*

\* 08/15/89      Quality:    0.95      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
248	3	CB	ADFG	3	2	2	2	0	0	0	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	5	0	120	0
102	5	0	0	0	0	0	0	320	0	0	0
103	0	1	0	0	0	0	0	320	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	1	0	0	0	0	0	645	0	120	0

\* None \*

Stream: GOODNEWS RIVER

Drainage: KUSKOKWIM BAY

Latitude: 500700N

Longitude: 1613500W

\* 08/15/89      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
254	3	DM	ADFG	2	2	2	2	2	1	1	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	10	0	0	0	0	10	0	101	0
102	4	0	70	0	0	0	0	270	0	0	0
103	4	2	160	0	0	0	0	160	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	8	2	240	0	0	0	0	440	0	101	0

\* Sockeye survey. Cloud cover got worse on lower river (index 101 & 102) with negative impact on visibility. chinook well past peak. Sockeye at peak. coho well before peak. Surveyed entire river.

\* 08/02/90      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
279	3	CA	ADFG	2	2	1	1	2	1	2	90
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	20	0	2	60	40	2170	3	422	0	30	0
102	405	0	29	434	38	420	0	4897	0	0	0
103	201	32	8	170	87	0	0	470	0	0	0
104											
105											
TOTAL	626	32	39	664	165	2590	3	5789	0	30	0

\* Surveyed Canyon Lake; saw 3350 sockeye.

Stream: GOODNEWS RIVER

Drainage: GOODNEWS BAY

Latitude: 500700N

Longitude: 1613500W

```

* 10/02/90      Quality: 0.9      Rating: 3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   280   1     MJL   USFW     3         1     1         1         2         2         2         80
*
*           INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*           INDEX      Chinook  Chinook  Redd      Chum     Chum     Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*   101
*   102
*   103
*   104
*   105
*
*   TOTAL      0         0         0         0         0         0         0         0         0         0         1775      0
*
* This observer also reported 39,030 arctic char.

```

```

* 08/28/91      Quality: 0.7      Rating: 3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   307   2     CA    ADFG     3         4     1         1         2         3         1
*
*           INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*           INDEX      Chinook  Chinook  Redd      Chum     Chum     Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*   101      38         0         10         140        200        212         0         400         450        1470         0
*   102      79         0         30         175        110         20         0         45         700         110         0
*   103      10         0         26         50         30         0         0         840        1200         20         0
*   104
*   105
*
*   TDYAL      127         0         66         365        340        232         0        1285        2350        1600         0
*
* Surveyed from Goodnews Lake to mouth. Haze and air pollution from Soviet fires caused noon light to be flat and not penetrating water.
* Too many sockeye carcasses to reasonably assess. No wind in village but lots of turbulence even on flats. Pilot - Dick Chandler.

```

\* 07/27/84      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
54	6	KF	ADFG	2	1	2	1	1	1	2	10
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	12	5	0	2450	0	0	0	0	0	175	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12	5	0	2450	0	0	0	0	0	175	0

\* KING SPAWN STAGE 2, CHUM 1, COHO 1. LAST SURVEY OF DAY OBSERVER FATIGUE HAD SOME ADVERSE EFFECT. DISTANCE IS STRAIGHT LINE NOT RIVER MILES. ENDED SURVEY IN ROLLING HILLS. \*

\* 07/26/87      Quality:    0.75      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
175	3	KF	ADFG	1	1	1	3	3	2	1	12
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	38	2	0	680	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	38	2	0	680	0	0	0	0	0	0	0

Stream: GRANITE CREEK

Drainage: TULUKSAK RIVER

Latitude: 605830N

Longitude: 1600550W

* 10/14/85      Quality: 0.55      Rating: 3      *													
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	*
---	---	---	---	---	---	---	---	---	---	---	---	---	*
73	7	KF	ADFG	3		2	4	2	3	3	3	5	*
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	*	
101	0	0	0	0	0	0	0	0	0	3	0	*	
102	0	0	0	0	0	0	0	0	0	0	0	*	
103	0	0	0	0	0	0	0	0	0	0	0	*	
104	0	0	0	0	0	0	0	0	0	0	0	*	
105	0	0	0	0	0	0	0	0	0	0	0	*	
TOTAL	0	0	0	0	0	0	0	0	0	3	0	*	
* STREAM WAS SURVEYED TWICE UPSTREAM AND DOWN. ONLY ONE COHO WAS SEEN ON SECOND DOWNSTREAM PASS. CREEK WAS BANK FULL. *													

Stream: HDLITNA RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 614045N

Longitude: 1571000W

```

* 07/16/84      Quality:  0.75      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---  ---    ---    ---    ---
*      27   6      DS   ADFG     1         2     2       2     2       2       2       1       120
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum      Chum    Pink     Pink    Sockeye  Sockeye  Coho     Coho
*
*      101          249        0         0      24964       0       0       0       400        0        0        0
*      102           46        0         0      3755       0       0       0       50         0        0        0
*      103          253        0         0      5750       0       0       0       51         0        0        0
*      104           95        0         0      1000       0       0       0       0         0        0        0
*      105            0        0         0         0         0       0       0       0         0        0        0
*
*      TOTAL        643        0         0      35469       0       0       0       501        0        0        0
*
* SURVEY BEGAN AT LITTLE TITNUK CREEK; ENDED AT KOGRUKLUK WEIR.

```

```

* 07/27/85      Quality:  0.65      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---  ---    ---    ---    ---    ---
*      87   6      DS   ADFG     3         1     3       3     3       3       2       2       20
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum      Chum    Pink     Pink    Sockeye  Sockeye  Coho     Coho
*
*      101           90        0         0      4680      1500       0       0       0         0        0        0
*      102            0        0         0         0         0       0       0       0         0        0        0
*      103            0        0         0         0         0       0       0       0         0        0        0
*      104            0        0         0         0         0       0       0       0         0        0        0
*      105            0        0         0         0         0       0       0       0         0        0        0
*
*      TOTAL         90        0         0      4680      1500       0       0       0         0        0        0
*
* SURVEY BEGAN AT KULUKBUK HILLS AND WAS ENDED 2- MILES UPRIVER DUE TO POOR WATER VISIBILITY AND INABILITY OF OBSERVER TO DISTINGUISH
* BETWEEN SPECIES.

```

Stream: HOLITNA RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 614045N

Longitude: 1571000W

\* 07/30/85      Quality:    0.6      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
96	6	DS	ADFG	3	2	3	3	3	2	1	23
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	120	0	0	0	0	0	0
104	145	115	0	370	450	0	0	300	50	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	145	115	0	370	570	0	0	300	50	0	0

\* WATER HIGH, MUDDY. 75 PERCENT CLOUD COVER. ENTIRE 103 AND 104 SURVEYED. \*

\* 07/27/86      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
106	6	DS	ADFG	2	1	1	3	2	2	1	28
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	240	0	0	750	0	0	0	430	0	0	0
103	410	0	0	1380	0	0	0	145	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	650	0	0	2130	0	0	0	575	0	0	0

\* BEGAN AT CONFLUENCE OF KOGRUKLUK AND CHUKOWAN RIVERS. ENDED AT NOGAMIUT. ELAPSED TIME 20 MINUTES. C-172RG. \*

Stream: HOLLINA RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 614045N

Longitude: 1571000W

```

* 07/27/87      Quality:    0.6      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      144   6     DS   ADFG     0         1     1       4     4         3         1         5
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Live      Live
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0         0         0
*      102          0         0         0         0         0         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL          0         0         0         0         0         0         0         0         0         0         0         0         0

```

\* Water too turbid for survey in area 103. C-172RG.

```

* 07/31/87      Quality:    0.7      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      185   6     DS   ADFG     3         1     2       3     2         3         1         56
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Live      Live
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          58         3         0      3901      135         0         0         20         0         0         0         0         0
*      102          30         3         0      100         0         0         0         0         0         0         0         0         0
*      103          377        37         0      632         48         0         0      362         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL          465         43         0      4633      183         0         0      382         0         0         0         0         0

```

\* Surveyed from confluence of Chukowan-Kogruluk Rivers to Kolukbuk Hills. Survey rated poor due to turbid water and after peak spawning of chinook and chum. C-172RG.

```

* 07/31/85      Quality:  0.85      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ---  -----  ----  ---  ---  ---  ---  ---  ---  ---
*      65   6     DS   ADFG      3      2      1      1      2      2      1      20
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101      81      0      0      266      0      0      0      0      0      0      0      0
*      102      54      0      0      104      0      0      0      0      0      0      0      0
*      103      0      0      0      0      0      0      0      0      0      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      135      0      0      370      0      0      0      0      0      0      0      0
*
* AREAS 101 AND 102 SURVEYED COMPLETELY.
*

```

```

* 07/31/85      Quality:  0.75      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ---  -----  ----  ---  ---  ---  ---  ---  ---  ---
*      84   6     KS   ADFG      2      2      2      2      2      2      1      20
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101      27      0      0      295      0      0      0      0      0      0      0      0
*      102      21      0      0      41      0      0      0      0      0      0      0      0
*      103      0      0      0      0      0      0      0      0      0      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      48      0      0      336      0      0      0      0      0      0      0      0
*
* LOWER PORTION OF RIVER WAS CLEAR WATER AND SKY.  UPPER PORTION OF RIVER WAS CLOUDY.  WATER WAS CLEAR, HOWEVER SOME FISH MAY HAVE BEEN
* MISSED DUE TO NOT ENOUGH LIGHT.  C-172RG.
*

```

Stream: HOLOKUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613215N

Longitude: 1583535W

\* 07/27/86      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
109	6	DS	AOFG	2	1	1	2	2	2	3	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	100	0	0	441	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	100	0	0	441	0	0	0	0	0	0	0

\* BEGAN AT CHINEEKLUK CREEK CONFLUENCE. ENDED AT MOUTH. ELAPSED TIME 24 MINUTES. \*

\* 07/26/87      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
145	6	DS	AOFG	2	1	1	1	1	2	1	35
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	141	1	32	1400	12	0	0	0	0	0	0
102	67	1	13	190	5	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	208	2	45	1590	17	0	0	0	0	0	0

\* Surveyed from ChineeKluk Creek to mouth. C-172RG. \*

Stream: HOLOKUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 613216N

Longitude: 1583536W

\* 07/20/88      Quality:    0.7      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
202	6	DS	ADFG	2	2	2	1	4	2	1	28
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	20	0	0	260	5	0	0	0	0	0	0
102	37	0	0	240	8	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	57	0	0	500	13	0	0	0	0	0	0

\* Sun was shining straight down the river causing glare from most aircraft positions. Survey=3 due to glare. Considerable smoke haze present. Began at mouth, ended at Chineekluk Creek. C-172RG.

\* 08/03/90      Quality:    0.95      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
282	3	CB	ADFG	3	1	1	1	1	2	2	35
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	43	10		600	125						
102	100	4		0	0						
103	0	0		0	0						
104											
105											
TOTAL	143	14	0	600	125	0	0	0	0	0	0

\* Fair amount of smoke from nearby fires. No fish seen in Tevyaqaq Lake. Survived from mouth to near 103-104 boundary.

Stream: INDIAN CREEK

Drainage: KUSKOKWIM BAY

Latitude: 591800N

Longitude: 1615830W

* 07/27/87      Quality: 0.85      Rating: 2      *															
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance	*
----	---	---	-----	-----	---	---	---	---	---	---	---	---	---	---	*
146	3	KS	ADFG	2		1	1	2		2	2	1		5	*
															*
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead		*
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho		*
101		0	0	0		1235	57	0	0	0	0	0	0		*
102		0	0	0		0	0	0	0	0	0	0	0		*
103		0	0	0		0	0	0	0	0	0	0	0		*
104		0	0	0		0	0	0	0	0	0	0	0		*
105		0	0	0		0	0	0	0	0	0	0	0		*
TOTAL		0	0	0		1235	57	0	0	0	0	0	0		*

* 07/27/87 Quality: 0.85 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
147	3	KS	ADFG	2	1	1	2	2	2	1	6	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	12	0	0	156	0	0	0	0	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	12	0	0	156	0	0	0	0	0	0	0	

* 09/03/89 Quality: 0.65 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
255	1	KF	ADFG	2	1	4	2	2	3	1	1	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	20	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	0	20	0	

\* Incidental observation. We were not actually surveying but flew over section 29 of Jacksmith Creek and I saw 20 cohos in pairs on 10 redds.

Stream: KANEKTOX RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

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* 06/21/84      Quality: 0.7      Rating: 3
*
*   Seq Method Obs Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   --- --- --- ---  --- ---  ---  ---  ---  ---  ---  ---  ---
*    28   6   KF   ADFG     1      1     3     2     3     2     1     20
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Dead
*   INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*    101          123         0         0         925         0         0         0         0         150         0         0         0
*    102           0         0         0           0         0         0         0         0         0         0         0         0
*    103           0         0         0           0         0         0         0         0         0         0         0         0
*    104           0         0         0           0         0         0         0         0         0         0         0         0
*    105           0         0         0           0         0         0         0         0         0         0         0         0
*
*   TOTAL          123         0         0         925         0         0         0         0         150         0         0         0
*
* SURVEYED LOWER 20 MILES. SEVERAL SCHOOLS OF SMELT.

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* 06/28/84      Quality: 0.75     Rating: 2
*
*   Seq Method Obs Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   --- --- --- ---  --- ---  ---  ---  ---  ---  ---  ---  ---
*    29   6   KF   ADFG     1      1     3     2     2     2     1     25
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Dead
*   INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*    101          201         1         0         0         0         0         0         0         0         0         0         0
*    102           0         0         0         0         0         0         0         0         0         0         0         0
*    103           0         0         0         0         0         0         0         0         0         0         0         0
*    104           0         0         0         0         0         0         0         0         0         0         0         0
*    105           0         0         0         0         0         0         0         0         0         0         0         0
*
*   TOTAL          201         1         0         0         0         0         0         0         0         0         0         0
*
* QUICKMAGUIJA CR. WAS END POINT. KING SEEN TO THE VICINITY OF FIRST 800 FOOT HILL JUST TO NORTH OF RIVER. NO SPORT FISHING ACTIVITY
* AT GUIDE CAMP IN FOOTHILLS VISIBLE.

```

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/09/84      Quality:    0.85      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
30	6	KF	ADFG	1	1	3	1	2	1	1	37
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	777	2	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	777	2	0	0	0	0	0	0	0	0	0

\* UNIDENTIFIED SALMON MOSTLY CHUMS AND SOCKEYE, PROBABLY SOME CHINOOK. DISCONTINUED SURVEY DUE TO THUNDERSTORM AT OLUMAGWILUTE RIVER. \*

\* 07/12/84      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
31	6	DS	ADFG	1	2	1	1	2	2	1	150
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	917	0	0	24732	0	2460	0	29810	0	0	0
102	182	0	0	191	0	10	0	940	0	0	0
103	1	0	0	0	0	0	0	130	0	0	0
104	0	0	0	0	0	0	0	30	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1100	0	0	24923	0	2470	0	30910	0	0	0

\* SURVEYED FROM MOUTH TO HEAD OF LAKE KAGATI. \*

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/27/84      Quality:    0.9      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
32	6	DS	ADFG	2	1	1	1	2	2	1	125
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	6262	0	0	40840	2200	19460	0	17260	0	4400	0
102	4480	900	0	7020	2500	3050	0	6820	0	0	0
103	540	0	0	500	0	1520	0	2350	0	0	0
104	0	0	0	0	0	0	0	4410	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11282	900	0	48360	4700	24030	0	30840	0	4400	0

\* SURVEY ENDED AFTER COMPLETING KAGATI LAKE. \*

\* 08/26/84      Quality:    0.75      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
33	6	DS	ADFG	1	2	3	1	2	2	1	110
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	1700	0	0	0	42030	0
102	0	0	0	0	0	0	0	0	0	4800	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	1700	0	0	0	46830	0

\* CDHD SURVEY RATED POOR BECAUSE TOO EARLY; OTHERWISE FAIR. SURVEY BEGAN AT MOUTH, ENDED 10 MILES BELOW KAGATI LAKE. \*

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/25/85      Quality:      0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---
79	6	DS	ADFG	2	2	3	1	1	2	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	9565	0	0	12845	0	250	0	6310	0	100	0
102	3590	0	0	1530	0	0	0	2420	0	0	0
103	310	0	0	10	0	0	0	370	0	0	0
104	0	0	0	0	0	0	0	6470	0	0	0
105	0	0	0	0	0	0	0	700	0	0	0
TOTAL	13465	0	0	14385	0	250	0	16270	0	100	0

\* SURVEY BEGAN AT MOUTH AND ENDED AFTER FLYING MARGIN OF KAGATI L. \*

\* 07/21/86      Quality:      0.65      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---
115	6	DS	ADFG	2	2	4	2	2	2	1	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	2747	0	0	15180	0	4400	0	9095	0	0	0
102	830	0	0	1590	0	120	0	2330	0	0	0
103	66	0	0	20	0	0	0	565	0	0	0
104	0	0	0	0	0	0	0	100	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3643	0	0	16790	0	4520	0	12090	0	0	0

\* BEGAN AT MOUTH: TIDE HIGH, RIVER TURBID. WATER CLEARED TO 2 AFTER 10 MILES. ENDED WITH PARTIAL SURVEY OF KAGATI LAKE. HEAVY WAVE ACTION ON LAKE. NO SOCKEYE IN SMALL LAKE NEAR WEST END OF LAKE. SPAWN STAGE: CHINOOK, CHUM = 2, SOCKEYE = 1. \*

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/27/86      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
102	3	KS	ADFG	2	1	1	2	2	2	1	70
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1451	0	0	5126	0	0	0	7054	0	835	0
102	884	0	0	2455	0	0	0	2235	0	0	0
103	35	0	0	1185	0	0	0	1250	0	0	0
104	0	0	0	0	0	0	0	300	0	0	0
105	0	0	0	0	0	0	0	4110	0	0	0
TOTAL	2370	0	0	8766	0	0	0	14949	0	835	0

\* RAIN FOR THE PREVIOUS WEEK CAUSED RIVER WATER LEVEL TO RISE. THE LOWER PORTION OF THE RIVER WAS TURBID WITH SOME DIFFICULTY IN SEEIN BOTTOM IN THE DEEPER SECTIONS. SOME KING SALMON MAY HAVE BEEN MISSED. ADDITIONALLY, THE TURBIDITY MADE THE ENUMERATION OF CHUM SALMON MORE DIFFICULT SINCE THE CHUM SALMON BLENDED MORE WOTH THE RIVER BOTTOM THEN THE OTHER SPECIES. PINK SALMON WERE NOT ENUMERATED.

\* 07/08/87      Quality:    0.55      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
153	3	KS	ADFG	1	2	3	3	3	3	3	24
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	491	0	0	2025	0	0	0	2200	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	491	0	0	2025	0	0	0	2200	0	0	0

\* Observed 1,975 chum, 1,900 sockeye and 491 chinook salmon above the sonar camp. Survey was poor due to high turbidity. Difficult to see in deeper portions of the river.

Stream: KANEKTOX RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

* 07/12/87      Quality:    0.6      Rating:      3      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
152	3	KF	ADFG	1	1	4	3	4	1	1	52	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	146	0	0	0	0	0	0	0	0	0	0	
102	26	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	172	0	0	0	0	0	0	0	0	0	0	

\* All unidentified salmon were sockeye or chums in area 101.

* 07/14/87      Quality:    0.85      Rating:      2      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
154	6	DH	ADFG	1	1	3	2	1	1	1	120	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	1662	0	0	0	0	0	0	0	0	0	0	
102	390	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	2052	0	0	0	0	0	0	0	0	0	0	

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/14/87      Quality:    0.85      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
151	6	LB	ADFG	1	1	3	2	1	1	1	20
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

\* Inexperienced surveyor was uncertain of species. \*

\* 07/16/87      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
150	6	DS	AADFG	1	2	3	2	2	1	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	1566	0	0	7020	0	0	0	7764	0	0	0
102	278	0	0	1220	0	0	0	1060	0	0	0
103	87	0	0	1180	0	0	0	1047	0	0	0
104	0	0	0	0	0	0	0	1005	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1931	0	0	9420	0	0	0	10876	0	0	0

\* Entire river surveyed and Kagati Lake. C-172RG. \*

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/26/87      Quality:    0.7      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
149	6	KS	ADFG	2	1	1	3	3	3	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	932	0	0	4100	0	0	0	3527	0	0	0
102	632	0	0	1910	0	0	0	2425	0	0	0
103	83	0	0	0	0	0	0	2795	0	0	0
104	0	0	0	0	0	0	0	11685	0	0	0
105	0	0	0	0	0	0	0	366	0	0	0
TOTAL	1647	0	0	6010	0	0	0	20798	0	0	0

\* Water turbidity made observation of chum and possibly chinook salmon difficult in the main channel. These two species may have been undercounted as a result.

\* 07/28/87      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
148	6	DS	ADFG	1	1	1	1	1	1	1	20
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	43740	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	43740	0	0	0

\* Surveyed lake only. Sockeye spawn stage=1. C-172RG.

Stream: KANEKTDK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/31/87      Quality: 0.95      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
183	6	DS	ADFG	3	2	1	1	1	1	2	85
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	2358	0	0	870	0	150	0	3245	0	550	0
102	1299	102	0	920	22	0	0	2063	0	0	0
103	450	4	0	335	0	0	0	2705	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	4107	106	0	2125	22	150	0	8013	0	550	0

\* Survey rated fair for chinook, poor for chum (major mortality has occurred), and good for sockeye. spawn stage: chinook=2, chum=3, sockeye=1. Began survey at outlet of Kagati Lake; ended at mouth. Coho counts were all within 5 miles of mouth. C-172RG.

\* 08/20/87      Quality: 1.      Rating: 1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
184	6	DS	ADFG	1	1	1	1	1	1	1	108
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	407	424	0	400	400	780	0	4084	745	18060	0
102	7	40	0	0	150	100	0	552	250	1790	0
103	26	1	0	0	0	0	0	0	0	206	0
104	0	0	0	0	0	0	0	23770	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	440	465	0	400	550	880	0	28406	995	20056	0

\* Began at mouth; ended at Kagati Lake. Early survey for coho. Should try again in a week. Sockeye in Kagati Lake are still one-third prespawners and two-thirds are spawning. This indicates that identification between sockeye and coho in late July survey was good as all sockeye type fish in upper river were most likely correctly called sockeye while those nearer the mouth were identified as coho. In some years, it is apparent that differentiating requires awareness of the fact that relatively fresh sockeye may be in the river in late July. C-172RG.

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 08/27/87      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
182	6	XS	ADFG	1	2	1	1	1	1	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	9	0	0	0	0	0	0	0	0	6294	0
102	13	0	0	0	0	0	0	25	0	2415	0
103	30	0	0	0	0	0	0	135	0	2163	0
104	0	0	0	0	0	0	0	30129	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	52	0	0	0	0	0	0	30289	0	10872	0

\* Surveyed from Kagat) Lake to the mouth of the Kanektok River. Good survey. Low, clear water levels. Noticed many side sloughs dry with numerous carcasses. Did not attempt to count carcasses. Fourteen rafters on river. C-172RG.

\* D6/24/88      Quality:    0.6      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
188	6	DS	ADFG	1	3	2	3	4	1	1	40
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	23	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	23	0	0	0	0	0	0	0	0	0	0

\* WATER TURBID DURING ENTIRE SURVEY. SURVEY ENDED AT FOOTHILLS. C-172RG.

Stream: KANEXTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

```

* 07/01/88      Quality: 0.5      Rating: 3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   190   6      0S   ADFG     1         3       2         3         4         3         1         45
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*             Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho     Coho
*
*   101             309      0         0         1046      2         75      0         910      0         0         0         0
*   102             0         0         0         0         0         0         0         0         0         0         0         0
*   103             0         0         0         0         0         0         0         0         0         0         0         0
*   104             0         0         0         0         0         0         0         0         0         0         0         0
*   105             0         0         0         0         0         0         0         0         0         0         0         0
*
*   TOTAL             309      0         0         1046      2         75      0         910      0         0         0         0

```

\* Mouth to five miles below foothills. Surveyed all meanders. Time 2:39-3:29 pm. Ended survey when no more fish were visible. C-172RG.

```

* 07/14/88      Quality: 0.65      Rating: 3
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   191   6      DS   ADFG     1         1       3         2         3         3         1         100
*
*   INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Dead
*             Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho     Coho
*
*   101             2258      1         0         8512      0         70      0         3805      0         0         0         0
*   102             74         0         0         130       0         30      0         1200      0         0         0         0
*   103             17         0         0         0         0         0         0         402      0         0         0         0
*   104             0         0         0         0         0         0         0         0         0         0         0         0
*   105             0         0         0         0         0         0         0         0         0         0         0         0
*
*   TOTAL             2349      1         0         8642      0         100     0         5407      0         0         0         0

```

\* Began survey at Kagat Lake. Ended at mouth. Overcast and haze in the upper 65 miles. Clear and light smoke haze on lower river. C-172RG.

\* 07/21/88      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
206	6	DS	ADFG	2	1	1	1	1	2	1	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	9115	0	0	16050	500	545	0	16570	0	0	0
102	1835	40	0	3893	20	125	0	4560	0	0	0
103	190	0	0	120	0	200	0	450	0	0	0
104	0	0	0	0	0	0	0	8860	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11140	40	0	20063	520	870	0	30440	0	0	0

\* Spawn stage: chinook=2, chum=2, sockeye=1. Began at mouth, ended at Kagati Lake. C-172RG. \*

\* 07/25/89      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
237	6	DS	ADFG	2	2	2	1	2	2	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	5733	0	0	5160	0	340	0	6770	0	1755	0
102	1845	0	0	1090	0	0	0	2525	0	0	0
103	336	0	0	20	0	0	0	120	0	0	0
104	0	0	0	0	0	0	0	5320	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7914	0	0	6270	0	340	0	14735	0	1755	0

\* C-207. Began at Kagati L.; ended at mouth. Upper 50 miles - 50% cloud cover; lower 60 miles - clear. Charlie Burkey: co-observer. \*

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 08/14/89      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
245	3	CB	A0FG	3		3	1	2	2	1	1	100
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	10	0	700	0	0	0	0	2100	0	0	0	
102	0	10	800	0	0	0	0	2500	0	0	0	
103	133	0	0	0	0	0	0	800	0	0	0	
104	0	0	0	0	0	0	0	3020	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	143	10	1500	0	0	0	0	8420	0	0	0	

\* Sockeye in 104 mostly scattered on nests on north shores of Kagati and Pegati Lakes. \*\*\* No fish in Kanuktik Lake. 4 king carcass, 140 king redds and 180 live sockeye in Kanuktik Creek. \*\*\* Lower half of 101 not surveyed due to poor water visability. 300 chum redds in 102 & 550 chum redds in 101.

\* 06/29/90      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
284	3	CA	A0FG	1		1	1	2	2	2	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	122											
102												
103												
104												
105												
TOTAL	122	0	0	0	0	0	0	0	0	0	0	

\* Too early to discriminate between chum and sockeye.

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 06/29/90      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
283	3	KF	ADFG	1	1	2	3	2	1	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	103										
102											
103											
104											
105											
TOTAL	103	0	0	0	0	0	0	0	0	0	0

\* Unidentified salmon are sockeye and chum. Only surveyed area 101. \*

\* 07/09/90      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
286	6	CA	ADFG	1	1	1	1	1	1	1	120
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	119	0		1402	0	0	0	2487	0	0	0
102	205	0		605	0	0	0	2620	0	0	0
103	14	0		160	0	0	0	400	0	0	0
104											
105											
TOTAL	338	0	0	2167	0	0	0	5507	0	0	0

\* Survey plane - C-207. Survey would have been better if slower plane was used. Water and weather were optional. Too early for peak sockeye survey. Began at Kagati Lake and ended above village. \*

Stream: KANEKTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

```

* 07/16/90      Quality: 0.95      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---    ---    ---    ---    ---
*      288   3      CA   ADFG    2         1     2       1       1       1       1       120
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Live      Live
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          1126      0        45        910       0        40        0        8000      0        0        0
*      102          1347      0         21        995       0         50        0        9410      0        0        0
*      103           90       0         0         570       0         0        0        1572      0        0        0
*      104           0       0         0          0         0         0        0        11800     0        0        0
*      105           0       0         0          0         0         0        0         1300      0        0        0
*
*      TOTAL      2563      0         66       2475      0         90        0       32082     0        0        0

```

\* Sockeye were seen in large balls spawning in back water from lakes down to mouth. Easily identifiable from red spawning color. Survey conditions were optimal.

```

* 07/09/91      Quality: 0.65      Rating: 3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---    ---    ---    ---    ---    ---
*      308   3      KF   ADFG    1         1     3       3       4       1       1       10
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Live      Live
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101
*      102
*      103
*      104
*      105
*
*      TOTAL      0        0         0         0         0         0         0         0         0         0         0         0

```

\* High, muddy water, no fish seen.

Stream: KANEXTOK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 594500N

Longitude: 1615600W

\* 07/12/91      Quality:    0.7      Rating:            3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vls.	Bottom	Sun Angle	Distance
309	3	KF	ADFG	1	2	3	2	3	1	1	50
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101											
102	43	1									
103											
104											
105											
TOTAL	43	1	0	0	0	0	0	0	0	0	0

\* Surveyed begining at upstream edge of 102. Area 102 surveyable but first fish were about half way down the section. Area 101 was not surveyable because of green water color.

\* 07/19/91      Quality:    1.      Rating:            1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vls.	Bottom	Sun Angle	Distance
310	6	CA	ADFG	1	1	1	1	1	1	1	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	830		24	3600				440			
102											
103											
104											
105											
TOTAL	830	0	24	3600	0	0	0	440	0	0	0

\* Survey of almost all of 101. Flew both channels. Survey called off short of goal due to rain clouds blocking light.



```

* 08/02/82      Quality:  1.25      Rating:  0
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*      264  12    KS   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                   Chinook Chinook   Redd   Chum   Chum   Pink   Pink   Sockeye Sockeye Coho   Coho
*
*      101      26592
*      102
*      103
*      104
*      105
*
*      TOTAL      26592      0      0      58442      0      66216      0      37350      0      13610      0
    
```

\* Sonar operational from 6/20 - 8/2. Data are estimated total escapements.

```

* 07/28/83      Quality:  1.25      Rating:  0
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---    ---    ---    ---    ---
*      265  12    KS   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                   Chinook Chinook   Redd   Chum   Chum   Pink   Pink   Sockeye Sockeye Coho   Coho
*
*      101      49312
*      102
*      103
*      104
*      105
*
*      TOTAL      49312      0      0      53895      0      0      0      22911      0      0      0
    
```

\* Sonar operational from 6/13 - 7/28. Data are total counts. No attempt was made to estimate missed counts, if any.

* 08/01/84 Quality: 1.25 Rating: 0 *												
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
34	12	OH	ADFG	0		0	0	0	0	0	0	0
101	38202	0	0	194345	0	46739	0	54352	0	31745	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	38202	0	0	194345	0	46739	0	54352	0	31745	0	

\* COUNTS REPRESENT TOTAL ABUNDANCE FROM 6/15/84 - 8/1/84. COUNTS WERE REGISTERED BY SONAR AND APPORTIONED INT SPECIES COUNTS USING DRIFT GILL NET TEST FISHING DATA FROM 6/15/84 - 7/18/84 AND BEACH SEINE DATA FROM 7/19/84 - 8/1/84. DATE IS LAST DAY OF OPERATION.

* 08/19/85 Quality: 1.25 Rating: 0 *												
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
100	12	DH	ADFG	0		0	0	0	0	0	0	0
101	38245	0	0	200140	0	40595	0	54754	0	32606	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	38245	0	0	200140	0	40595	0	54754	0	32606	0	

\* RESULTS ARE REVISED ESTIMATES FOR 1984.

```

* 07/18/86      Quality:  1.25      Rating:  0
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ----  ----  ----  ----  ----  ----  ----  ----  ----  ----
*      266   12   DH   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101      22922
*      102
*      103
*      104
*      105
*
*      TOTAL      22922      0      0      18808      0      8368      0      7751      0      0      0
*
* Sonar operational from 6/16 - 7/18. Data are counts. No attempt was made to estimate missed counts, if any.

```

```

* 07/18/87      Quality:  1.25      Rating:  0
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ----  ----  ----  ----  ----  ----  ----  ----  ----  ----  ----
*      263   12   DH   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101      11031
*      102
*      103
*      104
*      105
*
*      TOTAL      11031      0      0      11132      0      0      0      10520      0      0      0
*
* Site 1.2 miles upstream from marine water. Sonar operational from 6/27 - 7/18. Data is total count. No attempt was made to estimate missed proportion of the escapement, if any.

```

Stream: KANUKTIK CREEK

Drainage: KANEKTOK RIVER

Latitude: 595300N

Longitude: 1602800W

\* 07/31/87      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
155	3	KS	ADFG	3	1	2	1	2	2	2	13
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	230	0	0	30	24	0	0	139	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	230	0	0	30	24	0	0	139	0	0	0

\* Counted from mouth to lake. Did not count the other drainage at the forks, approximately 11 miles from the mouth. Kanuktik Creek is the lesser volume of the two creeks at this fork.

\* 07/09/90      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
285	6	CA	ADFG	1	1	1	1	1	1	1	13
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	30	0	0	0	0	0	0	200	0	0	0
102											
103											
104											
105											
TOTAL	30	0	0	0	0	0	0	200	0	0	0

\* Only one school of sockeye seen close to Kanektok River confluence. Probably to early for peak.

Stream: KANUKTIK CREEK

Drainage: KANEKTOK RIVER

Latitude: 595300N

Longitude: 1602800W

---

* 07/16/90	Quality:	0.95	Rating:	1									*
* Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	*	
* ---	---	---	---	---	---	---	---	---	---	---	---	*	
* 287	3	CA	ADFG	2	1	2	1	1	1	1	30	*	
* INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	*	
	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	*	
* 101	163	0	50	70	0	0	0	590	0	0	0	*	
* 102												*	
* 103												*	
* 104												*	
* 105												*	
* TOTAL	163	0	50	70	0	0	0	590	0	0	0	*	
* The lake had very few fish; less than 100. North branch of creek surveyed to lake, but no fish.													
*													

---

Stream: KANUKTIK LAKE

Drainage: KANUKTIK CREEK/KANEKTOK R.

Latitude: 594400N

Longitude: 1601900W

\* 07/31/87      Quality: 0.85      Rating: 2      \*

\*      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
156	3	KS	A0FG	3		1	2	1	2		2	2		3
INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	Live	Dead	
	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho			
101	0	0	0	0	0	0	0	25	0	0	0			
102	0	0	0	0	0	0	0	0	0	0	0			
103	0	0	0	0	0	0	0	0	0	0	0			
104	0	0	0	0	0	0	0	0	0	0	0			
105	0	0	0	0	0	0	0	0	0	0	0			
TOTAL	0	0	0	0	0	0	0	25	0	0	0			

\* Beautiful lake.      \*

\*      \*

Stream: KASIGLUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605045N

Longitude: 1611400W

\* 07/27/85      Quality:    0.65      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
93	6	KF	ADFG	2	1	3	3	3	2	1	24
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	2	0	0	652	7	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	0	0	652	7	0	0	0	0	0	0

\* PLANE C-172. TURBIDITY APPEARED TO BE ALGAE BLOOM, I.E. GREEN IN COLOR. SPAWNING STAGE EARLY IN PEAK. \*

\* 08/09/87      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
181	1	DH	ADFG	3	1	1	1	1	1	1	4
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	1000	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	1000	0	0	0	0	0	0

\* Chum carcasses observed during a ferry flight to Anchorage. Only four miles of river were surveyed. \*

Stream: KASIGLUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605045N

Longitude: 1611400W

```

* 07/26/89      Quality:    0.8      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      233  2F     DM   ADFG     2          1      2       2       2         2         1         10
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd        Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0         0         0           0         0         0         0         0         0         0         0
*      102          75        0         0          4950       0         0         0         0         0         0         0
*      103          0         0         0           0         0         0         0         0         0         0         0
*      104          0         0         0           0         0         0         0         0         0         0         0
*      105          0         0         0           0         0         0         0         0         0         0         0
*
*      TOTAL      75         0         0          4950       0         0         0         0         0         0         0

```

\* Began survey on upriver end where Kasigluk joins the Kisaralik. The Kasigluk is generally boarded by spruce & sheltered. The Kisaralik is much more open. Not confident in chum estimate. Survey ended on downriver end where Kasigluk rejoins with Kisaralik.

```

* 07/18/90      Quality:    0.9      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      293  2F     CB   ADFG     1          1      1       1       2         2         1         20
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd        Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0         0         0           200       0
*      102
*      103
*      104
*      105
*
*      TOTAL      0         0         0           200       0         0         0         0         0         0         0

```

\* Water fairly turbid and bottom hard to see clearly.

Stream: KASIGLUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605045N

Longitude: 1611400W

08/05/91		Quality: 0.4		Rating: 5								
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
312	3	KF	ADFG	2	1	1	5	5	5	1	30	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101											
	102											
	103											
	104											
	105											
	TOTAL	0	0	0	0	0	0	0	0	0	0	0
* Water very discolored, looked black.												

Stream: KINEGNAK RIVER

Drainage: KUSKOKWIM BAY

Latitude: 584915N

Longitude: 1614045W

07/28/87		Quality: 0.75		Rating: 2									
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance		
INDEX		Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
157	3	KS	ADFG	2	2	2	2	2	2	1	16		
101		3	4	0	915	329	0	0	0	0	0	0	
102		0	0	0	0	0	0	0	0	0	0	0	
103		0	0	0	0	0	0	0	0	0	0	0	
104		0	0	0	0	0	0	0	0	0	0	0	
105		0	0	0	0	0	0	0	0	0	0	0	
TOTAL		3	4	0	915	329	0	0	0	0	0	0	

Stream: KIPCHUK RIVER

Drainage: ANIAK RIVER

Latitude: 610300N

Longitude: 1591000W

```

* 09/11/84      Quality:  1.25      Rating:    0
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---    ---    ---    ---    ---
*      1    1      DH   ADFG      0      0      0      0      0      0      0      0      0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101          0          0          0          0          0          0          0          0          0          0          0
*      102          0          0          0          0          0          0          0          0          0          0          0
*      103          0          0          0          0          0          0          0          0          0          20         0
*      104          0          0          0          0          0          0          0          0          0          0          0
*      105          0          0          0          0          0          0          0          0          0          0          0
*
*      TOTAL          0          0          0          0          0          0          0          0          0          20         0

```

\* FLIGHT TRANSECTED KIPCHUK R. ABOUT 2 MILES ABOVE CONFLUENCE WITH BULLDOG CR.

```

* 07/27/87      Quality:  0.85      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---    ---    ---    ---    ---    ---
*      158   6      DS   ADFG      2      1      1      2      2      2      1      40
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101          31          0          6          5          0          0          0          0          0          0          0
*      102          79          0          19         10          0          0          0          0          0          0          0
*      103          83          0          13          0          0          0          0          0          0          0          0
*      104          0          0          0          0          0          0          0          0          0          0          0
*      105          0          0          0          0          0          0          0          0          0          0          0
*
*      TOTAL          193          0          38         15          0          0          0          0          0          0          0

```

\* Survey was poor in the lower five miles where chum spawning is most likely. Spawn stage: chinook=2, chum=0 (unobserved). Survey began in valley above Vrem camp and ended at mouth.

Stream: KIPCHUK RIVER

Drainage: ANIAK RIVER

Latitude: 610300N

Longitude: 1591000W

\* 07/18/88      Quality:    0.6      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
201	6	DS	ADFG	1	3	2	4	2	2	1	15
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	41	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	41	0	0	0	0	0	0	0	0	0	0

\* Survey began above canyon loop; ended at lower end of canyon due to turbidity.C-172RG. \*

\* 07/26/89      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
228	3	CB	ADFG	2	1	1	1	1	1	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	866	0	0	150	0	0	0	0	0	0	0
102	350	0	0	0	0	0	0	0	0	0	0
103	382	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1598	0	0	150	0	0	0	0	0	0	0

\* NONE \*

Stream: KIPCHUK RIVER

Drainage: ANIAK RIVER

Latitude: 610300N

Longitude: 1591000W

\* 07/26/89      Quality: 0.95      Rating: 1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
236	3	DS	ADFG	2	1	2	1	1	1	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	511	0	0	230	0	0	0	0	0	0	0
102	302	0	0	0	0	0	0	0	0	0	0
103	181	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	994	0	0	230	0	0	0	0	0	0	0

\* Began at mouth; ended at Kelly Vrem's camp. \*

\* 07/19/90      Quality: 1.      Rating: 1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
289	6	CB	ADFG	1	1	1	1	1	1	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	207			455							
102	94			0							
103	236			0							
104											
105											
TOTAL	537	0	0	455	0	0	0	0	0	0	0

\* Aircraft - C-207. Some kings schooled up in pools. \*

Stream: KIPCHUK RIVER

Drainage: ANIAK RIVER

Latitude: 610300N

Longitude: 1591000W

---

* 07/23/91	Quality: 0.75		Rating: 2										*		
* Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance	*
* ---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	*
* 313	3	CB	ADFG	2		1	3	2		2	2	1		60	*
* INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead		*
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho		*
	101	519				500									*
	102	145													*
	103	221													*
	104														*
	105														*
	TOTAL	885	0	0		500	0	0	0	0	0	0	0	0	*
* Mostly overcast. Water level high but no big factor. Brown bear near 102-103 boundary. Twelve caribou near head of river. Three moose in 103.															

---

```

* 07/13/84      Quality: 0.85      Rating: 2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   35   6     DS   ADFG     1         1     2       2       1         2         1         90
*
*           Live    Dead   Chinook  Live    Dead   Live    Dead   Live    Dead   Live    Dead
*           INDEX   Chinook Chinook  Redd    Chum   Chum   Pink   Pink   Sockeye Sockeye  Coho   Coho
*
*           101     98     0     0     640    0     0     0     21     0     0     0
*           102     55     0     0     3      0     0     0     7     0     0     0
*           103     4      0     0     0      0     0     0     0     0     0     0
*           104     0      0     0     0      0     0     0     0     0     0     0
*           105     0      0     0     0      0     0     0     0     0     0     0
*
*          TOTAL    157     0     0     643    0     0     0     28     0     0     0
*
* SURVEY ENDED NEAR UPPER CUTOFF TO KASIGLUK RIVER.

```

```

* 07/13/84      Quality: 0.95      Rating: 2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   36   6     KF   ADFG     1         1     2       1       1         1         1         60
*
*           Live    Dead   Chinook  Live    Dead   Live    Dead   Live    Dead   Live    Dead
*           INDEX   Chinook Chinook  Redd    Chum   Chum   Pink   Pink   Sockeye Sockeye  Coho   Coho
*
*           101     11     0     0     673    0     0     0     0     0     0     0
*           102     13     0     0     28     0     0     0     0     0     0     0
*           103     0      0     0     0      0     0     0     0     0     0     0
*           104     0      0     0     0      0     0     0     0     0     0     0
*           105     0      0     0     0      0     0     0     0     0     0     0
*
*          TOTAL    24     0     0     701    0     0     0     0     0     0     0
*
* UNFAMILIAR WITH STREAM AND I FELT THET MY SURVEY WAS NOT AS GOOD AS CONSIDIONS WOULD INDICATE. SURVEY WAS FROM LAKE OUTLET TO AREA
* WHERE TURBIDITY TOO GREAT TO SURVEY ABOUT 30 MILES ABOVE KUSKOKWIM.

```

Stream: KISARALIK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605130N

Longitude: 1611400W

\* 06/27/84      Quality:    0.7      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
37	6	05	ADFG	1	3	1	2	3	2	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	1702	0
103	0	0	0	0	0	0	0	0	0	1258	0
104	0	0	0	0	0	0	0	0	0	563	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	3523	0

\* BEGAN AT KISARALIK L. FIRST COHOS 2 MJ. BELOW LAKE. ENDED AT BOTTOM OF AREA 102 (UPPER KASIGLUK R. CUTOFF). SURVEY RATED POOR DUE TO EARLINESS. \*

\* 07/31/85      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
68	6	KF	ADFG	1	1	2	1	2	1	1	85
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	3	0	0	0	0	0	0
102	45	0	0	48	0	0	0	0	0	0	0
103	18	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	63	0	0	48	3	0	0	0	0	0	0

\* RIVER TURBID TO KASIGLUK CUTOFF. WATER TO 102 AND 103 CLEAR. FLOATERS AND GULL ACTIVITY INDICATE CHUMS MAINLY IN 101. SURVEYED TO GOLD CREEK. THUNDERSTORM HALTED SURVEY THERE. ONE BROWN BEAR IN 101. ONE EAGLE IN 103. \*

* 07/23/87 Quality: 0.7 Rating: 3 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	---
159	2F	DS	ADFG	0	2	3	4	2	0	1	80	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	0	0	0	

\* Plane and pilot were provided by USFWS. USFWS observer, Ray Jones, was also aboard. Kisaralik River was high, turbid to within 5 miles of Kisaralik Lake. No salmon were observed in the clear water near the lake.

* 07/31/87 Quality: 0.85 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	---
180	2F	DH	ADFG	1	1	2	2	2	1	1	30	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	29	0	0	0	0	0	0	15	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	29	0	0	0	0	0	0	15	0	0	0	

\* Water clear at Kisaralik Lake to unsurveyable at Golden Gate Falls. All sockeye at confluence of Gold Creek and Kisaralik River.

Stream: KISARALIK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605130N

Longitude: 1611400W

\* 07/16/88      Quality:    0.7      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
197	6	05	ADFG	1	2	2	3	2	2	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	41	0	0	690	0	0	0	0	0	0	0
102	17	0	0	93	0	0	0	0	0	0	0
103	2	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	0	0	783	0	0	0	0	0	0	0

\* Rated 3 due to early survey and turbid water from mid-area 102 downstream. Began at Kisaralik Lake, ended near lower cutoff to Kasigluk River. C-172RG. \*

\* 08/02/88      Quality:    0.65      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
215	2F	05	ADFG	3	2	2	2	3	3	1	65
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	8	470	100	0	0	0	0	0	0
102	784	29	172	540	395	0	0	0	0	0	0
103	56	0	28	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	840	29	208	1010	495	0	0	0	0	0	0

\* Survey began at Kisaralik Lake, ended about 2 miles into Area 101. Survey rating: chinook=2, chum=3. Past peak of spawning for both spp., but chinook mostly on redds in good numbers and few redds were abandoned. USFWS aircraft piloted by George Walters. \*

Stream: KISARALIK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605130N

Longitude: 1611400W

\* 07/27/89      Quality:    0.65      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
244	2F	KF	ADFG	1	3	3	2	2	2	1	40
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	91	0	0	770	0	0	0	0	0	0	0
103	61	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	152	0	0	770	0	0	0	0	0	0	0

\* NONE \*

\* 07/18/90      Quality:    0.9      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
301	2F	CB	ADFG	2	2	1	1	1	2	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101											
102	246			400							
103	385			0							
104											
105											
TOTAL	631	0	0	400	0	0	0	0	0	0	0

\* Tailwind made for fast survey. \*

Stream: KISARALIK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605130N

Longitude: 161140 W

```

* 07/18/90      Quality:    0.9      Rating:    1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      302  2F     OM   ADFG     2         2     1     1     1     2     1     65
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          69          0          0          169
*      102          59          0          0           35
*      103          122         0          0
*      104
*      105
*
*      TOTAL      250         0         0         204         0         0         0         0         0         0         0

```

\* Only surveyed upper 4 miles of index 101. Estimates for 103 should be good. Concentration began to wane in the lower half of 102 but the estimates should still be reasonable, especially for kings. Kings stood out very well in the clear water. Most of the kings were paired up.

```

* 08/05/91      Quality:    1.      Rating:    1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      314  3     KF   ADFG     2         1     1     1     1     1     1     80
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          12          0          0
*      102          145         0          0          15
*      103          72          0          0
*      104          9          0          0
*      105
*
*      TOTAL      238         0         0         15         0         0         0         0         0         0         0

```

\* The 12 kings in 104 were primarily in the lake margin in north shore of the small lake that drains into the main lake. Two were in the head water stream of that smaller lake. 101 was mostly obscured by turbid water. Discontinued survey after upper third was surveyed.

Stream: KISARALIK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605130N

Longitude: 1611400W

* 08/28/91      Quality: 0.95      Rating: 1      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	---
315	2	KF	ADFG	1	2	1	1	1	1	1	60	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101					12					36	
	102										148	
	103	1	2								42	
	104											
	105											
TOTAL			1	2	0	0	12	0	0	0	226	0

\* Also saw 50 char and 2 caribou in area 103.  
\*

Stream: KOGRUKLUK RIVER

Drainage: HOLITNA RIVER

Latitude: 604900N

Longitude: 1575100W

```

* 07/27/87      Quality:    1.      Rating:    1
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---   ---      ---        ---    ---      ---    ---        ---    ---        ---
*      160   6      DS    ADFG      2          1       1        1       1          1        1          1         43
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          715        2        144      2055      16        0        0       415        0        0        0
*      102           0         0         0         0         0         0         0         0         0         0         0
*      103           0         0         0         0         0         0         0         0         0         0         0
*      104           0         0         0         0         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      715         2        144      2055      16         0         0       415         0         0         0
*
* Ideal conditions for this stream.  Spawn stage: chinook=2, chum=2, sockeye=1.

```

```

* 07/23/88      Quality:    0.8     Rating:    2
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---   ---      ---        ---    ---      ---    ---        ---    ---        ---
*      209   6      DS    ADFG      2          2       2        1       2          2        1          1         60
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          1970       17         0      4940      260        0         0      2626       40         0         0
*      102           0         0         0         0         0         0         0         0         0         0         0
*      103           0         0         0         0         0         0         0         0         0         0         0
*      104           0         0         0         0         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      1970        17         0      4940      260         0         0      2626        40         0         0
*
* Began at weir, ended about 10 miles below highest valley.  C-172RG.

```

* 07/31/76 Quality: 1.25 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
10	11	DS	ADFG	0	0	0	0	0	0	0	0	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	5818	0	0	8417	0	0	0	2366	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	5818	0	0	8417	0	0	0	2366	0	0	0	
* TOTAL SEASON ESCAPEMENT ESTIMATE ABOVE WEIR 6/29-7/21. *												

* 07/27/77 Quality: 1.25 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
11	11	DS	ADFG	0	0	0	0	0	0	0	0	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	1945	0	0	19444	0	0	0	1637	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	1945	0	0	19444	0	0	0	1637	0	0	0	
* TOTAL SEASON ESCAPEMENT ESTIMATE ABOVE WEIR. OPERATED 7/14-7/27. *												

Stream: KOGRUKLUK WEIR PROJECT

Drainage: KOGRUKLUK RIVER/HOLITNA R.

Latitude: 605036N

Longitude: 1575049W

\* 07/31/78      Quality: 1.25      Rating: 1

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
12	11	RB	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	13601	0	0	49010	0	0	0	1699	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	13601	0	0	49010	0	0	0	1699	0	0	0

\* TOTAL SEASON ESCAPEMENT 6/28-7/31.

\* 07/24/79      Quality: 1.25      Rating: 2

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
13	11	RB	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	11420	0	0	4836	0	0	0	476	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11420	0	0	4836	0	0	0	476	0	0	0

\* TOTAL SEASON ESCAPEMENT ESTIMATE FOR 6/29-7/31. OPERATION 7/1-7/24 DUE TO HIGH WATER.

```

* 07/11/80      Quality:  1.25      Rating:    2
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---   ---      ---      ---    ---      ---    ---      ---    ---      ---
*      14   11    RB    ADFG      0         0       0        0        0        0        0         0         0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Reidd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101      6572         0         0         41777         0         0         0         0         3200         0         0         0
*      102         0         0         0          0         0         0         0         0         0         0         0         0
*      103         0         0         0          0         0         0         0         0         0         0         0         0
*      104         0         0         0          0         0         0         0         0         0         0         0         0
*      105         0         0         0          0         0         0         0         0         0         0         0         0
*
*      TOTAL      6572         0         0         41777         0         0         0         0         3200         0         0         0
*
* TOTAL SEASON ESTIMATED ESCAPEMENT FOR 6/29-7/31.  OPERATION 7/1-7/11 OUE TO HIGH WATER.

```

```

* 10/05/81      Quality:  1.25      Rating:    1
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---   ---      ---      ---    ---      ---    ---      ---    ---      ---      ---
*      15   11    RB    ADFG      0         0       0        0        0        0        0         0         0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Reidd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101      16820         0         0         57373         0         0         0         0         18077         0         11537         0
*      102         0         0         0          0         0         0         0         0         0         0         0         0
*      103         0         0         0          0         0         0         0         0         0         0         0         0
*      104         0         0         0          0         0         0         0         0         0         0         0         0
*      105         0         0         0          0         0         0         0         0         0         0         0         0
*
*      TOTAL      16820         0         0         57373         0         0         0         0         18077         0         11537         0
*
* TOTAL SEASON ESCAPEMENT 6/29-7/31 FOR CHINOOK, SOCKEYE, CHUM; 8/10-10/5 FOR COHO.  COMPLETE DOCUMENTATION.

```

Stream: KOGRUKLUK WEIR PROJECT

Drainage: KOGRUKLUK RIVER/HOLITNA R.

Latitude: 605036N

Longitude: 1575049W

\* 09/14/82      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	11	DS	ADFG	0		0	0	0	0	0	0	0	0	0
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
101		12185	0	0		79580	0	0	0	22156	0	40395	0	
102		0	0	0		0	0	0	0	0	0	0	0	
103		0	0	0		0	0	0	0	0	0	0	0	
104		0	0	0		0	0	0	0	0	0	0	0	
105		0	0	0		0	0	0	0	0	0	0	0	
TOTAL		12185	0	0		79580	0	0	0	22156	0	40395	0	

\* TOTAL SEASON ESCAPEMENT ESTIMATE 6/29-7/31 FOR CHINOOK, SOCKEYE, CHUM; 8/10-9/30 FOR COHO. OPERATION 7/9-9/14 DUE TO HIGH WATER. \*

\* 09/27/83      Quality:    1.25      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	11	DS	ADFG	0		0	0	0	0	0	0	0	0	0
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
101		2992	0	0		9407	0	0	0	1176	0	8513	0	
102		0	0	0		0	0	0	0	0	0	0	0	
103		0	0	0		0	0	0	0	0	0	0	0	
104		0	0	0		0	0	0	0	0	0	0	0	
105		0	0	0		0	0	0	0	0	0	0	0	
TOTAL		2992	0	0		9407	0	0	0	1176	0	8513	0	

\* TOTAL SEASON ESCAPEMENT ESTIMATE 6/29-7/31 FOR CHINOOK, SOCKEYE, CHUM; 8/10-9/30 FOR COHO. OPERATION 6/24-7/2, 7/6-11, AND 8/13-9/27 DUE TO HIGH WATER AND AIRCRAFT ACCIDENT. \*

Stream: KOGRUKLUK WEIR PROJECT

Drainage: KOGRUKLUK RIVER/HOLITNA R.

Latitude: 605036N

Longitude: 1575049W

```

* 09/15/84      Quality:  1.25      Rating:    1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      18   11   DS   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101      4928      0      0      41484      0      0      0      4130      0      26538      0
*      102      0      0      0      0      0      0      0      0      0      0      0
*      103      0      0      0      0      0      0      0      0      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      4928      0      0      41484      0      0      0      4130      0      26538      0
*
* TOTAL SEASON ESCAPEMENT 6/19-8/20 FOR CHINOOK, SOCKEYE, CHUM; 7/24-10/05 ESCAPEMENT ESTIMATE FOR COHO. OPERATED FROM 6/19-9/15/
* TERMINATED 9/15 DUE TO FISCAL CONSIDERATIONS. COMPLETE DOCUMENTATION FOR CHINOOK, SOCKEYE, CHUM.

```

```

* 10/06/85      Quality:  1.25      Rating:    1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      256   11   OS   ADFG      0      0      0      0      0      0      0      0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101      4438      0      0      17181      0      0      0      4366      0      18520      0
*      102
*      103
*      104
*      105
*
*      TOTAL      4438      0      0      17181      0      0      0      4366      0      18520      0
*
* Weir operational 7/6 - 8/15, 8/24 - 9/23. Total season escapement estimate 6/19 - 8/15 for chinook, sockeye, chum; 8/12 - 10/6
* escapement estimate for coho (last count was on 9/23).

```

\* 10/06/86      Quality:    1.25      Rating:      0      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
257	11	DS	ADFG	0		0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	4296			15511				4179		21431		
102												
103												
104												
105												
TOTAL	4296	0	0	15511	0	0	0	4179	0	21431	0	

\* Weir operational from 6/29 -7/19, 8/21 - 9/7. Total season escapement estimate 6/19 - 8/15 for chinook, sockeye, chum; 8/1 - 10/6 for coho. \*

\* 10/06/87      Quality:    1.25      Rating:      0      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
258	11	DS	ADFG	0		0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	4063			17422				973		25870		
102												
103												
104												
105												
TOTAL	4063	0	0	17422	0	0	0	973	0	25870	0	

\* Weir operational 7/15 - 7/16, 8/9 - 9/6. Total season chinook, sockeye, and chum escapement estimates were calculated one year later in 1988 from aerial survey proportions. Total season estimate for coho 8/1 - 10/6. \*

\* 10/06/88      Quality:    1.25      Rating:      0      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
259	11	DS	ADFG	0	0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	11194			41888				6158		12799	
102											
103											
104											
105											
TOTAL	11194	0	0	41888	0	0	0	6158	0	12799	0

\* Weir operational from 7/5 - 9/17. Total season escapement estimates for chinook, sockeye, chum 5/19 - 8/15; coho 8/1 - 10/6. \*

\* 07/14/89      Quality:    1.25      Rating:      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
300	11	DS	ADFG								
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	11940			39548				5810			
102											
103											
104											
105											
TOTAL	11940	0	0	39548	0	0	0	5810	0	0	0

\* Weir operational from 7/07 to 7/14 and 8/23 to 8/24. Chinook, sockeye and chum counts are estimates. Pink salmon can pass through weir, therefore pink count not accurate. Weir operated only two days during coho migration due to high water. \*

```

* 09/07/90      Quality: 1.25      Rating: 2
*
*   Seq Method Obs Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   --- --- --- ---  --- ---  ---  ---  ---  ---  ---  ---  ---
*   296  11  C8   ADFG
*
*   INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                Chinook Chinook  Redd    Chum   Chum  Pink  Pink  Sockeye Sockeye Coho  Coho
*
*   101          10219                26765          1          8406          5879
*   102
*   103
*   104
*   105
*
*   TOTAL      10219          0          0      26765          0          1          0      8406          0      5879          0

```

\* Weir operational from 6/28 to 9/07. Coho count is an estimate due to high water ending project early. Pink salmon can pass through weir, therefore pink count is not accurate.

```

* 09/15/91      Quality: 1.25      Rating: 2
*
*   Seq Method Obs Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   --- --- --- ---  --- ---  ---  ---  ---  ---  ---  ---  ---
*   324  11  C8   ADFG
*
*   INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*                Chinook Chinook  Redd    Chum   Chum  Pink  Pink  Sockeye Sockeye Coho  Coho
*
*   101          7280                24193          3          16458          9963
*   102
*   103
*   104
*   105
*
*   TOTAL      7280          0          0      24193          0          3          0      16458          0      9963          0

```

\* Weir operational from 7/05 to 9/15. Pink salmon can pass through weir, therefore pink count not accurate. Coho count is an estimate due to high water ending project early.

```

* 07/27/85      Quality:    1.      Rating:    1
*
*      Seq  Method  Obs   Agency   Spawn Stg   Wind   Weather   Water   Water Vis.  Bottom  Sun Angle  Distance
*      ----  -----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*      89    6      DS    ADFG      0        1       1       1       1       1       1       5
*
*           Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*           INDEX  Chinook Chinook  Redd    Chum   Chum   Pink  Pink  Sockeye Sockeye Coho  Coho
*
*           101      0       0       0       0       0       0       0       0       0       0       0
*           102      0       0       0       0       0       0       0       0       0       0       0
*           103      0       0       0       0       0       0       0       0       0       0       0
*           104      0       0       0       0       0       0       0       0       0       0       0
*           105      0       0       0       0       0       0       0       0       0       0       0
*
*           TOTAL      0       0       0       0       0       0       0       0       0       0       0
*
* BEAUTIFUL, CLEAR CREEK. LOWER FIVE MILES APPEAR IDEAL FOR CHINOOK, COHO SPAWNING. ABOVE THAT, THE GRADIENT IS VERY STEEP. NO SALMON
* OBSERVED.
*

```

Stream: KWETHLUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 604900N

Longitude: 1612700W

```

* 07/13/84      Quality:  0.75      Rating:  2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---  ---    ---    ---    ---
*      39   6      DS   ADFG     1         1       2       3       2       2       1       70
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0
*      102          100        0         0         876        0         0         0         90         0         0         0
*      103          150        0         0         703        0         0         0         60         0         0         0
*      104           23         0         0         57         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      273         0         0         1636        0         0         0         150         0         0         0
*
* 101 TOO TURBID TO SURVEY.  ENDED SURVEY AT NEAREST APPROACH TO ICEBOX L. AND KISARALIK RIVER.

```

```

* 07/13/84      Quality:  0.85      Rating:  2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---  ---    ---    ---    ---    ---
*      38   6      KF   ADFG     1         1       2       2       2       1       1       70
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0
*      102           17         0         0         172        0         0         0         0         0         0         0
*      103           27         0         0         538        0         0         0         0         0         0         0
*      104           0         0         0         0         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      44         0         0         710        0         0         0         0         0         0         0
*
* 101 TOO TURBID TO SURVEY.  102 LOWER PORTION TOO TURBID TO SURVEY; UPPER PART PARTIALLY OBSCURED AND 103 GLARE.  BLUE TURBIDITY COMING
* OUT OF STREAM ABOVE CANYON CREEK.  SOURCE SHOULD BE CHECKED

```

Stream: KWETHLUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 604900N

Longitude: 1612700W

\* 08/02/85      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
85	6	KF	ADFG	2	1	1	2	2	2	1	45
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	11	0	0	575	20	0	0	0	0	0	0
103	35	0	0	133	23	0	0	0	0	0	0
104	4	0	0	434	1	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	50	0	0	1142	44	0	0	0	0	0	0

\* 101 TO A MUD BANK 5 MILES ABOVE THREE STEP MT. TOO TURBID TO SURVEY. TURBIDITY FROM MUD BANK. BLUE CLAY IN WATER REST OF WAY TO BREAST MT. FROM CLAY BANKS IN UPPER RIVER. 104 CANYON CREEK TO BREAST MT.

\* 07/16/88      Quality:    0.7      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
198	6	DS	ADFG	1	2	2	3	2	2	1	50
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	87	0	0	582	0	0	0	0	0	0	0
102	25	0	0	114	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	112	0	0	696	0	0	0	0	0	0	0

\* Water=3 from 3-step Mountain to Devil's Elbow. Water=2 above Devil's Elbow. Survey began at 3-step Mt., ended at Canyon Creek. C-172RG.

Stream: KWETHLUK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 604900N

Longitude: 1612700W

```

* 08/02/88      Quality:  0.7      Rating:  2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   213  2F     DS   ADFG     3         2     3         2         2         2         1         50
*
*           Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*           INDEX  Chinook  Chinook  Redd   Chum   Chum   Pink  Pink  Sockeye  Sockeye  Coho  Coho
*
*           101      0      0      0      0      0      0      0      0      0      0      0
*           102     129     3     40     260    390     0      0     35     0      0      0
*           103     468    22    131    560    440     0      0      0      0      0      0
*           104      0      0      0      0      0      0      0      0      0      0      0
*           105      0      0      0      0      0      0      0      0      0      0      0
*
*           TOTAL    597     25    171    820    830     0      0     35     0      0      0
*
* Began at confluence with Canyon Creek, ended about 5 miles above Three-step Mt., boundary of Area 101. Rating: chinook=2, chum=3.
* USFWS aircraft piloted by George Walters.

```

```

* 07/26/89      Quality:  0.8      Rating:  2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  -
*   232  2F     DM   ADFG     2         1     2         2         2         2         1         40
*
*           Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Dead   Live   Dead
*           INDEX  Chinook  Chinook  Redd   Chum   Chum   Pink  Pink  Sockeye  Sockeye  Coho  Coho
*
*           101      0      0      0      0      0      0      0      0      0      0      0
*           102     304     0      0     690     0      0      0      0      0      0      0
*           103     712     0      0     187     0      0      0      0      0      0      0
*           104     141     0      0      0      0      0      0      0      0      0      0
*           105      0      0      0      0      0      0      0      0      0      0      0
*
*           TOTAL    1157     0      0     877     0      0      0      0      0      0      0
*
* Began survey on upriver end at the bluffs immediately downriver off the confluence of Crooked Cr. with Canyon Cr. Survey ended about 4
* miles upriver of 3-Step Mountain because of murky water. Looked like there were few carcasses around. I feel reasonably confident
* about the king estimate but not so confident in chum estimate. I need more experience estimating school size. These data should be
* used only for the chinook index. The chum observations made by Kim Francisco (KF) this date should be used for the chum index.

```

* 07/26/89 Quality: 0.9 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
----	---	----	----	---	---	---	---	---	---	---	---	
231	2F	KF	ADFG	2	2	2	1	1	1	1	45	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	0	0	
102	142	3	0	1133	0	0	0	0	0	0	0	
103	415	3	0	484	0	0	0	0	0	0	0	
104	47	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	604	6	0	1617	0	0	0	0	0	0	0	

\* Tail wind caused some side slip problems. Use these data for chum index only.

* 07/20/90 Quality: 1. Rating: 1 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
----	---	----	----	---	---	---	---	---	---	---	---	
290	2F	DM	ADFG	2	1	1	1	1	1	1	98	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101												
102	211	2		3994	0							
103	989	1		1514	1							
104												
105												
TOTAL	1200	3	0	5508	1	0	0	0	0	0	0	

\* Vis. in lower 2 miles of stream was obscured in deep pools due to turbidity. Early in the survey shadows hampered vis. along few very short sections of bank, but impact was extremely minimal because of scarcity of trees to cast shadows. Water level very low. In one braided section of channel in index area 103 riffle portions were nearly dry (only in one braid). Still spawning chums and kings were observed in pools. Most fish were spawning. Kings frequently appeared in groups of 4 or 5 with one pair of larger fish accompanied by 2 or 3 smaller kings. Fish distributed well throughout survey area - one bear - pilot was George Walters, USF&WS.

Stream: KWETHLUK RIVER

Drainage: KUSKOWKIM RIVER

Latitude: 604900N

Longitude: 1612700W

\* 08/02/91      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vls.	Bottom	Sun Angle	Distance
316	1F	CB	ADFG	2		1	3	2	2	2	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101												
102		212				740						
103		606				2850						
104												
105												
TOTAL			818	0	0	3590	0	0	0	0	0	0

\* USF&WS SuperCub on floats with Chris Christenson pilot. Water below 102 to turbid to see fish. Saw brown bear 10 miles above elbow. \*

\* 08/28/91      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vls.	Bottom	Sun Angle	Distance
317	1F	CB	ADFG	1		1	1	1	1	1	1	60
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101										244		
102										646		
103										1593		
104												
105												
TOTAL			0	0	0	0	0	0	0	0	2483	0

\* USF&WS SuperCub on floats with Chris Christenson pilot. Began survey at 3-Step and ended at Canyon Creek. Fish schooled up in eddies behind sand bars and at bends of river. \*

Stream: LITTLE SWIFT CREEK

Drainage: CANYON CREEK/KWETHLUK R.

Latitude: 601600N

Longitude: 1595000W

---

* 07/31/BS	Quality:	0.9	Rating:	3										*
* Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance			*
* 95	6	XF	ADFG	1	1	3	1	1	1	1	3			*
* INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho			*
* 101	1	0	0	0	0	0	0	0	0	0	0			*
* 102	0	0	0	0	0	0	0	0	0	0	0			*
* 103	0	0	0	0	0	0	0	0	0	0	0			*
* 104	0	0	0	0	0	0	0	0	0	0	0			*
* 105	0	0	0	0	0	0	0	0	0	0	0			*
* TOTAL	1	0	0	0	0	0	0	0	0	0	0			*
* CROSSED FROM COLO CREEK.														*

---

\* 07/26/87      Quality:    0.7      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
169	6	DS	ADFG	0		1	1	3	2	4	2	38	
	INOEX		Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101			0	0	0	0	0	0	0	0	0	0	0
102			0	0	0	0	0	0	0	0	0	0	0
103			0	0	0	0	0	0	0	0	0	0	0
104			0	0	0	0	0	0	0	0	0	0	0
105			0	0	0	0	0	0	0	0	0	0	0
TOTAL			0	0	0	0	0	0	0	0	0	0	0

\* Water highly stained by organic solubles. No salmon or carcasses observed. C-172RG \*

\* 07/27/89      Quality:    0.7      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
226	3	DM	ADFG	2		1	3	2	2	3	1	40	
	INOEX		Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101			58	0	0	0	0	0	0	0	0	0	0
102			0	0	0	0	0	0	0	0	0	0	0
103			0	0	0	0	0	0	0	0	0	0	0
104			0	0	0	0	0	0	0	0	0	0	0
105			0	0	0	0	0	0	0	0	0	0	0
TOTAL			58	0	0	0	0	0	0	0	0	0	0

\* Shadows of bordering trees make it difficult to see fish along 1/3-1/5 of the shadowed side of stream. Fish are in pairs for the most part. Lower end (below a major log jam causing an oxbow cutoff) water was noticeably murkier & got worse the farther we got down stream. Channel also got deeper & dark until we finally quit surveying. Survey included only middle reaches of river. No index areas established for the stream; therefore counts are listed in area 101. \*

```

* 07/27/89      Quality: 0.75      Rating: 2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*   222   3     DS   ADFG     2         L     2       2       2       2       3       2       40
*
*           Live   Dead   Chinook  Live   Dead   Live   Dead   Live   Dead   Live   Dead
*           INDEX  Chinook Chinook  Redd   Chum   Chum   Pink  Pink  Sockeye Sockeye Coho  Coho
*
*   101           52     0     0     0     0     0     0     0     0     0     0
*   102           0     0     0     0     0     0     0     0     0     0     0
*   103           0     0     0     0     0     0     0     0     0     0     0
*   104           0     0     0     0     0     0     0     0     0     0     0
*   105           0     0     0     0     0     0     0     0     0     0     0
*
*   TOTAL           52     0     0     0     0     0     0     0     0     0     0

```

\* Some glare. Brown bottom. Quit survey about 30 miles above mouth due to increasing stain and turbidity as survey progressed downstream.

Stream: OSKAWALIK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 614430N

Longitude: 1581130W

```

* 07/31/85      Quality:  0.55      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      66   6     DS   ADFG     3         2       3       3       3       3       1       42
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101         16         1         0         801       75         0         0         0         0         0         0
*      102         22         7         0         170      140         0         0         0         0         0         0
*      103         15         0         0         45        50         0         0         0         0         0         0
*      104          0         0         0          0         0         0         0         0         0         0         0
*      105          0         0         0          0         0         0         0         0         0         0         0
*
*      TOTAL         53         8         0        1016      265         0         0         0         0         0         0
*
*  STARTED AT CONFLUENCE ON EAST SIDE OF HENDERSON MT. AND CONTINUED TO MOUTH.

```

```

* 07/30/87      Quality:  0.8      Rating:    2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      171   6     DS   ADFG     2         1       1       2       3       2       1       42
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101         118         2         31         107       4         0         0         0         0         0         0
*      102          70         3         17         495      21         0         0         0         0         0         0
*      103          0         0         0          0         0         0         0         0         0         0         0
*      104          0         0         0          0         0         0         0         0         0         0         0
*      105          0         0         0          0         0         0         0         0         0         0         0
*
*      TOTAL         188         5         48         602      25         0         0         0         0         0         0
*
*  Began just above Henderson Mt. Surveyed to mouth. Spawn stage: chinook=2, chum=2.

```

* 07/20/88 Quality: 0.75 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
205	6	05	ADFG	2	2	2	1	2	3	1	37	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	24	0	0	1495	290	0	0	0	0	0	0	
102	31	0	0	1205	75	0	0	0	0	0	0	
103	25	0	0	920	125	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	80	0	0	3620	490	0	0	0	0	0	0	
* Smoke haze. Began at Henderson Mt., ended at mouth. C-172RG. *												

* 08/03/90 Quality: 0.95 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
291	3	CB	ADFG	3	1	1	1	1	2	2	37	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	44	0		350	0							
102	57	0		990	0							
103	12	0		0	0							
104												
105												
TOTAL	113	0	0	1340	0	0	0	0	0	0	0	
* Fair amount of smoke from nearby fires. Surveyed from Henderson Mt. to mouth. *												

Stream: DYAK CREEK

Drainage: KUSKOKWIM BAY

Latitude: 594743N

Longitude: 1615700W

```

* 06/28/88      Quality: 0.9      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      189   3     KF   ADFG     1      1      2      1      1      2      1      15
*
*      INDEX  Live  Dead  Chinook  Live  Dead  Live  Dead  Live  Dead  Live  Dead  Live  Dead
*              Chinook  Chinook  Redd  Chum  Chum  Pink  Pink  Sockeye  Sockeye  Coho  Coho
*
*      101      0      0      0      0      0      0      0      0      0      0      0      0      0
*      102      0      0      0      0      0      0      0      0      0      0      0      0      0
*      103      0      0      0      0      0      0      0      0      0      0      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      0      0      0      0      0      0      0      0      0      0      0      0      0
  
```

\* Surveyed from Dyak Creek mouth along the entire length of Kilokuyak Creek and the south fork of Dyak Creek to where it joins the Kanektok River. There were 14 beaver dams that completely blocked the stream. Pool size indicated very little flow. The junction of Kilokuyak and Kanektok is a beaver pond marsh with no clear channel joining the two rivers. It is unlikely that there is sufficient flow to attract salmon. Therefore, Dyak Creek is an unlikely bypass of the Kanektok sonar site.

* 07/28/87      Quality: 0.75      Rating: 2												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
170	3	KS	ADFG	2	2	2	2	2	2	1	1	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	500	0	0	0	0	0	200	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	500	0	0	0	0	0	200	0	

* 07/11/89      Quality: 1.      Rating: 1												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
246	9	WD	ADFG	1	1	1	1	1	1	1	1	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	100	0	0	0	2	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	100	0	0	0	2	0	0	0	

\* The 1000 feet of the river downstream of the mine tailings were surveyed. Juvenile salmon were seen rearing in pools and channel in the east channel. Two sloughs downstream and east of the tailings but north of the mainstem and west of the east channel also supported rearing salmon.

\* 08/04/81      Quality: 1.25      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
50	11	DS	ADFG	0		0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	2153	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2153	0	0	0	0	0	0	0	0	0	0	0

\* TOTAL SEASON ESCAPEMENT ESTIMATE FOR SALMON RIVER WEIRED AND UNWEIRED PORTIONS USING WEIR COUNTS IN CONJUNCTION WITH AERIAL SURVEY PROPORTIONS. \*

\* 07/30/82      Quality: 1.25      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
51	11	DS	ADFG	0		0	0	0	0	0	0	0
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	612	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	612	0	0	0	0	0	0	0	0	0	0	0

\* TOTAL SEASON ESCAPEMENT ESTIMATE FOR SAMON RIVER WEIRED AND UNWEIRED PORTIONS USING WEIR COUNT IN CONJUNCTION WITH AERIAL SURVEY PROPORTIONS. \*

* 08/05/84 Quality: 0.7 Rating: 3 *													
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---
48	6	DS	ADFG	3		1	4	1		3	2	1	3
INDEX		Live Chinook	Dead Chinook	Chinook Redd		Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101		12	2	4		100	50	0	0	0	0	0	0
102		0	0	0		0	0	0	0	0	0	0	0
103		0	0	0		0	0	0	0	0	0	0	0
104		0	0	0		0	0	0	0	0	0	0	0
105		0	0	0		0	0	0	0	0	0	0	0
TOTAL		12	2	4		100	50	0	0	0	0	0	0
* THICK CLOUD COVER DID NOT ALLOW ENOUGH LIGHT TO SURVEY, SO TERMINATED AFTER THREE MILES FROM THE MOUTH. *													

* 08/05/84 Quality: 0.7 Rating: 3 *													
Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun Angle	Distance
---	---	---	---	---	---	---	---	---	---	---	---	---	---
47	6	KF	ADFG	3		1	4	1		3	2	1	1
INDEX		Live Chinook	Dead Chinook	Chinook Redd		Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101		13	0	5		0	0	0	0	0	0	0	0
102		0	0	0		0	0	0	0	0	0	0	0
103		0	0	0		0	0	0	0	0	0	0	0
104		0	0	0		0	0	0	0	0	0	0	0
105		0	0	0		0	0	0	0	0	0	0	0
TOTAL		13	0	5		0	0	0	0	0	0	0	0
* TOO DARK TO SURVEY. DISCONTINUED AFTER SHORT DISTANCE FROM MOUTH. *													

Stream: SALMON RIVER/ANIAC RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610400N

Longitude: 1591100W

\* 07/28/86      Quality:    0.95      Rating:      1

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
105	6	DS	ADFG	2		1	1	1	1	1	2	1		30
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
101		282	0	90		240	0	0	0	0	0	0	0	0
102		54	0	15		0	0	0	0	0	0	0	0	0
103		0	0	0		0	0	0	0	0	0	0	0	0
104		0	0	0		0	0	0	0	0	0	0	0	0
105		0	0	0		0	0	0	0	0	0	0	0	0
TOTAL		336	0	105		240	0	0	0	0	0	0	0	0

\* SURVEY BEGAN AT CRIPPLE CREEK CONFLUENCE. ELAPSED TIME 23 MINUTES.

\* 07/27/87      Quality:    1.      Rating:      1

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance
172	6	DS	ADFG	2		1	1	1	1	1	1	1		35
INDEX		Live	Dead	Chinook		Live	Dead	Live	Dead	Live	Dead	Live	Dead	
		Chinook	Chinook	Redd		Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho	
101		459	0	76		2075	0	0	0	0	0	0	0	0
102		57	0	18		15	0	0	0	0	0	0	0	0
103		0	0	0		0	0	0	0	0	0	0	0	0
104		0	0	0		0	0	0	0	0	0	0	0	0
105		0	0	0		0	0	0	0	0	0	0	0	0
TOTAL		516	0	94		2090	0	0	0	0	0	0	0	0

\* Ideal survey conditions for this stream. Began at mouth. Ended at Cripple Creek confluence. Spawn stage: chinook=2, chum=3. C-172RG.

```

* 07/18/88      Quality:  0.85      Rating:  2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  -----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*      200   6      DS   ADFG      1      2      2      1      1      2      1      25
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          184      0      0      310      0      0      0      0      0      0      0
*      102           60      0      0      0      0      0      0      0      0      0      0
*      103           0      0      0      0      0      0      0      0      0      0      0
*      104           0      0      0      0      0      0      0      0      0      0      0
*      105           0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      244      0      0      310      0      0      0      0      0      0      0
*
* Began at Cripple Creek; ended at mouth.  Survey=2 because too early.  C-172RG.

```

```

* 07/26/89      Quality:  0.9      Rating:  1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  -----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*      229   03      CB   ADFG      2      1      1      1      2      2      1      30
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          672      0      0      100      0      0      0      0      0      0      0
*      102           0      0      0      0      0      0      0      0      0      0      0
*      103           0      0      0      0      0      0      0      0      0      0      0
*      104           0      0      0      0      0      0      0      0      0      0      0
*      105           0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      672      0      0      100      0      0      0      0      0      0      0
*
* Was not able to determine boundaries of index areas; on wrong side of river to distinguish landmarks. Total count is recorded as index
* area 101 even though survey included everything from Cripple Cr. (103) to mouth.

```

Stream: SALMON RIVER/ANIAX RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610400N

Longitude: 1591100W

```

* 07/26/89   Quality: 0.95   Rating: 1
*
*   Seq Method Obs Agency   Spawn Stg   Wind   Weather   Water   Water Vis.   Bottom   Sun Angle   Distance
*   --- --- --- ---      --- ---    ---    ---      ---    ---         ---         ---
*   235   3   OS   ADFG      2         1       1       1       1       2         1         30
*
*   INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Live   Dead   Live   Dead
*             Chinook Chinook  Redd     Chum   Chum  Pink  Pink  Sockeye Sockeye Coho  Coho
*
*   101          478     0     0         130     0     0     0     0     0     0     0     0
*   102          88     0     0           0     0     0     0     0     0     0     0     0
*   103          65     0     0           0     0     0     0     0     0     0     0     0
*   104           0     0     0           0     0     0     0     0     0     0     0     0
*   105           0     0     0           0     0     0     0     0     0     0     0     0
*
*   TOTAL        631     0     0         130     0     0     0     0     0     0     0     0

```

Began at Cripple Creek.; end at mouth. Charlie Burkey: co-observer.

```

* 07/19/90   Quality: 1     Rating: 1
*
*   Seq Method Obs Agency   Spawn Stg   Wind   Weather   Water   Water Vis.   Bottom   Sun Angle   Distance
*   --- --- --- ---      --- ---    ---    ---      ---    ---         ---         ---
*   292   6   C8   ADFG      1         1       1       1       1       1         2         25
*
*   INDEX      Live   Dead   Chinook   Live   Dead   Live   Dead   Live   Live   Dead   Live   Dead
*             Chinook Chinook  Redd     Chum   Chum  Pink  Pink  Sockeye Sockeye Coho  Coho
*
*   101          138     0           540     0
*   102          320     0           0     0
*   103          138     0           0     0
*   104
*   105
*
*   TOTAL        596     0     0         540     0     0     0     0     0     0     0     0

```

Aircraft - C-207. Some glare due to sun angle. Some kings schooled up in pools.

Stream: SALMON RIVER/ANIYAK RIVER

Drainage: ANIYAK RIVER

Latitude: 610400N

Longitude: 1591100W

* 07/23/91 Quality: 0.8 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
318	3	CB	ADFG	2	1	2	2	2	2	1	25	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	L01	300			850							
	L02	198										
	L03	85										
	L04											
	L05											
TOTAL		583	0	0	850	0	0	0	0	0	0	0
* Aircraft C-207, Hagelands. Overcast. Black bear seen near Fisher Creek. *												

```

* 07/23/84      Quality:  0.8      Rating:  2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  ----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*    49   6     DS   ADFG      2        2      2       1       2       2       1       40
*
*           Live    Dead    Chinook    Live    Dead    Live    Dead    Live    Dead    Live    Dead
*           INDEX   Chinook  Chinook   Redd    Chum   Chum   Pink   Pink   Sockeye  Sockeye  Coho   Coho
*
*           101      32      0      0      0      0      0      0      0      0      0      0
*           102      43      0      0      0      0      0      0      0      0      0      0
*           103       3      0      0      0      0      0      0      0      0      0      0
*           104     494      5      0      0      0      0      0      0      0      0      0
*           105       0      0      0      0      0      0      0      0      0      0      0
*
*           TOTAL      572      5      0      0      0      0      0      0      0      0      0

```

\* SURVEYED ALL THREE AREAS TO THE EXTENT OF SALMON COUNTS. DUE TO A LACK OF LANDMARKS IT IS NOT POSSIBLE TO DESCRIBE EXACT ENDING POINTS FOR EACH FORK.

```

* 07/26/85      Quality:  0.85     Rating:  2
*
*   Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*   ----  ----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*    99   6     DS   ADFG      2        1      2       2       2       1       1       40
*
*           Live    Dead    Chinook    Live    Dead    Live    Dead    Live    Dead    Live    Dead
*           INDEX   Chinook  Chinook   Redd    Chum   Chum   Pink   Pink   Sockeye  Sockeye  Coho   Coho
*
*           101       5      0      0      0      0      0      0      0      0      0      0
*           102      15      0      0      0      0      0      0      0      0      0      0
*           103       4      0      0      0      0      0      0      0      0      0      0
*           104     601      0      0      0      0      0      0      0      0      0      0
*           105       0      0      0      0      0      0      0      0      0      0      0
*
*           TOTAL      625      0      0      0      0      0      0      0      0      0      0

```

\* AREA 102 WAS CLOUDY AND DIFFICULT TO SEE FISH.

```

* 07/26/87      Quality: 0.65      Rating: 3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      173  6    DS   ADFG    1         1     3       3       3       2       1       52
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0         0         17         0         0         0         0         0         0         0         0
*      102          268        0         4         0         0         0         0         0         0         0         0
*      103          24         0        23         0         0         0         0         0         0         0         0
*      104          182         2         0         0         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      474         2         44         0         0         0         0         0         0         0         0

```

\* Highest water level in ten years during chinook spawning. Counts only obtained in upper two-thirds of each index area. 70 percent cloud cover decreased water visibility considerably. C-172RG.

```

* 07/25/88      Quality: 0.75      Rating: 2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      211  6    DS   ADFG    2         2     3       1       2       2       1       44
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          28         0         0         0         0         0         0         0         0         0         0
*      102          32         1         0         0         0         0         0         0         0         0         0
*      103          39         0         0         0         0         0         0         0         0         0         0
*      104          402         0         0         0         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      501         1         0         0         0         0         0         0         0         0         0

```

\* Overcast, light wind. Easy visibility of chinook in the shallow river accounts for fair survey rating=2. C-172RG.

\* 07/27/89      Quality:    0.7      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
225	F3	DM	ADFG	2	1	3	2	2	3	1	40
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	19	0	0	0	0	0	0	0	0	0	0
103	11	0	0	0	0	0	0	0	0	0	0
104	257	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	287	0	0	0	0	0	0	0	0	0	0

\* No carcasses seen. Most of the fish were in pairs. Index area 101: lots of dark pools, difficult to see. Index area 102: river was generally very shallow & broad with lots of small islands and braided channels. Bottom was generally light/mottled colored (yellow-orange) reducing the contrast between fish and substrate. Index area 104: some dark pools; several bends were partially cut off by flight path. Index area 103: river was braided & shallow with braided channel; light/mottled colored bottom as in index area 102; several bends were partially cut off by flight path. Did not see jacks.

\* 07/27/89      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
223	3	DS	ADFG	2	2	1	1	2	2	2	38
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	52	1	0	0	0	0	0	0	0	0	0
103	7	2	0	0	0	0	0	0	0	0	0
104	387	3	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	446	6	0	0	0	0	0	0	0	0	0

\* High glare on area 102. Shadows caused by tall trees on much of lower part of each area.

---

```

* 07/28/87      Quality:  0.75      Rating:    2      *
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance  *
*      ---  -  ---  -  -  -  -  -  -  -  -  -  -  *
*      174   3    KS   ADFG      2      2      2      2      2      2      1      3      *
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead      *
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho      *
*
*      101          2        0        0        6        0        0        0        0        0        0        0        0      *
*      102          0        0        0        0        0        0        0        0        0        0        0        0      *
*      103          0        0        0        0        0        0        0        0        0        0        0        0      *
*      104          0        0        0        0        0        0        0        0        0        0        0        0      *
*      105          0        0        0        0        0        0        0        0        0        0        0        0      *
*
*      TOTAL          2        0        0        6        0        0        0        0        0        0        0        0      *
*
*
*
*

```

---

Stream: SLATE CREEK/TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 605900N

Longitude: 1600100W

\* 07/24/84      Quality:    1      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
52	9	KS	ADFG	2	1	1	1	1	1	1	1
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	4	0	1	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	4	0	1	0	0	0	0	0	0	0	0

\* ONLY SURVEYED FROM TULUKSAK TO HYDROPOWER DITCH. \*

\* 10/14/85      Quality:    0.55      Rating:      3      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
74	7	KF	ADFG	3	2	4	2	3	3	2	12
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	3	1
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	3	1

\* LIVE COHO SEEN WERE HEAVILY FUNGUSED. CREEK WAS BANK FULL. SUSPECT HIGH WATER AND BEARS REASON FOR SMALL NUMBERS. \*

Stream: SOUTH FORK AROLIK RIVER

Drainage: AROLIK RIVER

Latitude: 593000N

Longitude: 1612000W

```

* 09/04/84      Quality: 1.      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  -----  ---  -----  ~~~  ---  ---  ---  ---  ---  ---  ---
*      53    1     KF   ADFG     2        1     1     1     1     1     1     1     10
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         200         0
*      102          0         0         0         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL          0         0         0         0         0         0         0         0         0         200         0
*
* STREAM TOO NARROW AND TWISTY TO ACTUALLY SURVEY.  IT WAS ON OUR ROUTE RETURNING FROM GOONNEWS TO BETHEL.  FISH FIRST SEEN IN CASINO
* CREEK.  COHO SPAWNING TO THE EAST FORK.  ALSO SAW PAIR OF COHO IN CRATER CREEK INCLUDED IN 200 TOTAL.
*

```

Stream: TAKOTNA RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 625700N

Longitude: 1553600W

```

* 07/25/87      Quality:  0.75      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---    ---    ---    ---    ---
*      176   6     DS   ADFG     0         2     2       4       2         0         1         70
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                  Chinook  Chinook    Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0        0        0          0          0          0         0         0         0         0         0
*      102          0        0        0          0          0          0         0         0         0         0         0
*      103          0        0        0          0          0          0         0         0         0         0         0
*      104          0        0        0          0          0          0         0         0         0         0         0
*      105          0        0        0          0          0          0         0         0         0         0         0
*
*      TOTAL          0        0        0          0          0          0         0         0         0         0         0

```

\* Water deeply stained from organic solubles, some turbidity. Many gravel bars, but no carcasses or other signs of salmon.

```

* 07/27/89      Quality:  0.65      Rating:    3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---    ---  ---    ---    ---    ---    ---    ---
*      224   3     DS   ADFG     0         1     2       3       3         3         1         50
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                  Chinook  Chinook    Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0        0        0          0          0          0         0         0         0         0         0
*      102          0        0        0          0          0          0         0         0         0         0         0
*      103          0        0        0          0          0          0         0         0         0         0         0
*      104          0        0        0          0          0          0         0         0         0         0         0
*      105          0        0        0          0          0          0         0         0         0         0         0
*
*      TOTAL          0        0        0          0          0          0         0         0         0         0         0

```

\* Upper 10 miles downstream from Big Waldron Fork clear; lower 40 miles or so moderately to deeply stained. No salmon visible; no salmon carcasses visible on gravel bars. River is low with numerous exposed gravel bars. Recommend no future surveys in July. May be later arriving salmon spawning in the river as some reports indicate.

* 07/25/87 Quality: 0.65 Rating: 3 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	
139	6	DS	ADFG	0	2	1	4	2	3	1	3	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101	0	0	0	0	0	0	0	0	0	0	0
	102	0	0	0	0	0	0	0	0	0	0	0
	103	0	0	0	0	0	0	0	0	0	0	0
	104	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0
* Too stained and turbid for survey. Surveyed five miles in upper valley. North tributary about five miles from mouth is in similar condition. *												

Stream: TELAQUANA LAKE

Drainage: TELAQUANA RIVER/STONY R.

Latitude: 605700N

Longitude: 1535200W

\* 07/27/85      Quality:    0.9      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
90	6	DS	ADFG	2	1	1	2	2	1	1	30
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	15426	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	15426	0	0	0

\* SURVEY BEGAN 5 MILES DOWNSTREAM FROM LAKE AND INCLUDED ENTIRE LAKESHORE. \*

\* 07/28/89      Quality:    0.75      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
221	3	DS	ADFG	0	2	3	2	2	1	1	10
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

\* No sockeye in lake or upper three miles of Telaquana River. River turbidity (glacial) moderate. Lake slightly more glacial turbidity than in past surveys by this observer. \*

Stream: TEVYARAQ LAKE

Drainage: CHINEEKLUK CREEK/HOLOKUK R.

Latitude: 611605N

Longitude: 1580143W

\* 07/31/85      Quality:    0.8      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
98	6	DS	ADFG	3	3	1	2	2	1	1	5
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	50	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	50	0	0	0

\* 07/31/85      Quality:    0.7      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
86	6	KS	ADFG	2	2	3	2	2	2	1	2
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	35	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	35	0	0	0

\* SOUTHERN THREE QUARTERS OF LAKE WAS SURVEYED. C-172RG. \*

Stream: TEVYARAQ LAKE

Drainage: CHINEEKLUK CREEK/HOLOKUK R.

Latitude: 611605N

Longitude: 1580143W

\* 07/27/86      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
107	6	DS	ADFG	2		1	1	1	1	1	2	3
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	165	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	165	0	0	0	

\* 07/26/87      Quality:    1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
168	6	DS	ADFG	0		1	1	1	1	1	1	2
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	0	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	0	0	0	

\* No salmon in lake. C-172RG. \*

Stream: TEVYARAQ LAKE

Drainage: CHINEEKLUK CREEK/HOLDKUK R.

Latitude: 611605N

Longitude: 1580143W

* 07/21/88 Quality: 0.85 Rating: 2 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
----	----	----	----	----	----	----	----	----	----	----	----	
204	6	05	ADFG	1	2	2	1	1	2	1	4	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101	0	0	0	0	0	0	0	100	0	0	0
	102	0	0	0	0	0	0	0	0	0	0	0
	103	0	0	0	0	0	0	0	0	0	0	0
	104	0	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	100	0	0	0
* Smoke haze. C-172RG. *												

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

\* 07/13/84      Quality:    0.85      Rating:      2      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
56	6	DS	ADFG	1	1	2	1	2	2	1	50
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	93	0	0	1625	0	15	0	0	0	0	0
102	24	0	0	10	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	117	0	0	1635	0	15	0	0	0	0	0

\* SURVEY BEGAN AT FOG R. CONFLUENCE AND ENDED AT BEAR CREEK. \*

\* 07/13/84      Quality:    0.9      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
55	6	KF	ADFG	1	1	2	1	1	2	1	40
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	41	0	0	2838	0	0	0	0	0	0	0
102	22	0	0	10	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	63	0	0	2848	0	0	0	0	0	0	0

\* AREA 101 WAS EXCELLENT. AREA 102 WAS HINDERED BY USE OF C-172 WHICH WAS A BIT FAST FOR JOB BUT SECOND PASS WORKED WELL. ENDED SURVEY AT BEAR CREEK. \*

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

```

* 07/24/84      Quality: 1.      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ---  -----  ----  ---  ----  ----  ----  ----  ---  ----
*      59   9     KS   ADFG     2       1     1       1     1     1     1     1     5
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0         0
*      102          0         0         7         5         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      21         0         7         5         0         0         0         0         0         0         0         0
*
* SURVEYED DOWNSTREAM OF SLATE CREEK TO APPROXIMATELY 1 MILE BELOW DRY CREEK.  SEE SCOTT AND WEAGLE SURVEYS FOR SAME DAY.

```

```

* 07/24/84      Quality: 1.      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ---  -----  ----  ---  ----  ----  ----  ----  ---  ----
*      58   9     KW   NGC     2       1     1       1     1     1     1     1     5
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Dead      Live      Dead
*                   Chinook  Chinook      Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye      Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0         0
*      102          0         0         0         0         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL      25         0         0         0         0         0         0         0         0         0         0         0
*
* KEN WEAGLE WITH NORTHLAND AS CONSULTING BIOLOGIST DID SURVEY FROM UPPER BRIDGE TO BEAR CREEK HYDRODITCH.

```

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

```

* 07/24/84      Quality: 0.5      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      57   9      HS   BLM     2          1     1      11     1          1      1          6
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum     Chum     Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0        0        0          0        0        0        0        0        0        0        0
*      102          57       0        0          0        0        0        0        0        0        0        0
*      103          0        0        0          0        0        0        0        0        0        0        0
*      104          0        0        0          0        0        0        0        0        0        0        0
*      105          0        0        0          0        0        0        0        0        0        0        0
*
*      TOTAL      57       0        0          0        0        0        0        0        0        0        0

```

\* GRANITE CREEK TO NYAC.

```

* 07/20/85      Quality: 1.      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---    ---  ---    ---      ---  ---    ---  ---    ---    ---    ---
*      116   9      RH   NGC     2          1     1      1     1          1      1          5
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead
*                   Chinook  Chinook    Redd      Chum     Chum     Pink     Pink     Sockeye  Sockeye  Coho     Coho
*
*      101          0        0        0          0        0        0        0        0        0        0        0
*      102          9        0        0          0        0        0        0        0        0        0        0
*      103         20       0        0          0        0        0        0        0        0        0        0
*      104          0        0        0          0        0        0        0        0        0        0        0
*      105          0        0        0          0        0        0        0        0        0        0        0
*
*      TOTAL      29       0        0          0        0        0        0        0        0        0        0

```

\* FOOT SURVEY DONE BY ROD HOFFMAN, A PRIVATE CONSULTANT FOR NORTHLAND MINING COMPANY. SURVEY BEGAN AT NORTHLAND BRIDGE (SLATE CREEK) AND ENDED AT CONFLUENCE OF CALIFORNIA CREEK.

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

```

* 07/25/85      Quality: 0.9      Rating: 1
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*      91    6    DH    ADFG      2      1      1      2      1      2      1      45
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101      135      0      0      3092      116      0      0      0      0      0      0
*      102      7      0      0      90      0      0      0      0      0      0      0
*      103      0      0      0      0      0      0      0      0      0      0      0
*      104      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      142      0      0      3182      116      0      0      0      0      0      0
*
* SURVEY CONDITIONS NEAR OPTIMUM. SURVEY BEGAN AT NYAC AND ENDED 3 MI. ABOVE FOG RIVER CONFLUENCE.

```

```

* 10/14/85      Quality: 0.5      Rating: 3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ----  ----  ---  -----  ----  ----  ----  ----  ----  ----  ----  ----
*      76    7    KF    ADFG      3      4      4      2      3      2      4      10
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101      0      0      0      0      0      0      0      0      0      0      0
*      102      0      0      0      0      0      0      0      0      0      0      0
*      103      0      0      0      0      0      0      0      0      0      3      0
*      104      0      0      0      0      0      0      0      0      0      0      0
*      105      0      0      0      0      0      0      0      0      0      0      0
*
*      TOTAL      0      0      0      0      0      0      0      0      0      0      3      0
*
* SURVEY COMBINED AERIAL FOOT. A COHO IN GOOD CONDITION WAS SIGHTED ON REDD. LANDED FOR SUBSTRATE SAMPLE AND FOUND AT LEAST 3 COHO IN AREA. SUBSTRATE SAMPLE IMPOSSIBLE DUE TO WATER DEPTH. COHO APPEARED TO STILL BE SPAWNING. WATER TURBIDITY INCREASED DUE TO BANK FULL CONDITION UNTIL SURVEY NOT POSSIBLE ABOUT 3 MILES ABOVE NYAC. AREAS 102 AND 101 UNSURVEYABLE.

```

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

\* 07/07/86      Quality:      1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
118	2	DW	TDCO	1	1	1	1	1	1	1	24
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

\* DW = DOUGLAS WEIR; CONSULTANT FOR NORTHLAND GOLD CORPORATION. HE HAS WORKED IN CONJUNCTION WITH THE DEPARTMENT SINCE 1983 AND HIS SURVEY TECHNIQUE IS THE SAME AS THAT USED FOR DEPARTMENT SURVEYS OF THE TULUKSAK. \*

\* 07/09/86      Quality:      1.      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
119	2	DW	TDCO	1	1	1	1	1	1	1	24
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0

\* SEE NOTES 7/7/86 DW TULUKSAK SURVEY. \*

```

* 07/28/86      Quality:  0.75      Rating:  3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      104   6    DS   ADFG      2      1      1      3      3      2      1      30
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          3          0          0          20          0          0          0          0          0          0          0
*      102          1          0          0          0          0          0          0          0          0          0          0
*      103          0          0          0          0          0          0          0          0          0          0          0
*      104          0          0          0          0          0          0          0          0          0          0          0
*      105          0          0          0          0          0          0          0          0          0          0          0
*
*      TOTAL          4          0          0          20          0          0          0          0          0          0          0
*
* RIVER VERY HIGH, TURBID, CLEARING IN AREA 102.  SURVEY ENDED AT NYAC.  ELAPSED TIME 23 MINUTES.

```

```

* 08/02/86      Quality:  0.75      Rating:  3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      120   2    DW   TDCO      2      3      2      2      2      1      1      30
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead
*      INDEX      Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          2          1          0          0          0          0          0          0          0          0          0
*      102          0          0          0          0          0          0          0          0          0          0          0
*      103          0          0          0          0          0          0          0          0          0          0          0
*      104          0          0          0          0          0          0          0          0          0          0          0
*      105          0          0          0          0          0          0          0          0          0          0          0
*
*      TOTAL          2          1          0          0          0          0          0          0          0          0          0
*
* SEE 7/7/86 DW TULUKSAK SURVEY.  CHUM SALMON CARCASSES WERE COMMON.  NO COUNT POSSIBLE FROM FOG RIVER TO FOOTHILLS.

```

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

```

* 08/03/86      Quality: 0.8      Rating: 2
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      122   8    DW   TDCO    2         1     3       2       2         1       1         0
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Live      Live
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          0         0         0         0         0         0         0         0         0         0         0         0         0
*      102          4         1         0         0         0         0         0         0         0         0         0         0         0
*      103          0         0         0         0         0         0         0         0         0         0         0         0         0
*      104          0         0         0         0         0         0         0         0         0         0         0         0         0
*      105          0         0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL          4         1         0         0         0         0         0         0         0         0         0         0         0

```

\* COUNT MADE ON RAFTY TRIP FROM DUGOUT CREEK TO FOOTHILLS. BASED ON DW'S FIVE YEARS OF WORK ON TULUKSAK RIVER, THESE WERE WORST COUNTING CONDITIONS ENCOUNTERED. CHINOOK POPULATION LESS THAN 50 BASED ON PAST YEARS DISTRIBUTION. NO CHUMS ABOVE THE FOOTHILLS.

```

* 07/28/87      Quality: 0.75     Rating: 3
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---
*      177   3    KF   ADFG    1         1     1       3       3         2       1         36
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Live      Live      Live      Live      Live
*                   Chinook  Chinook  Redd      Chum      Chum      Pink      Pink      Sockeye  Sockeye  Coho      Coho
*
*      101          60         0         0        258         0         0         0         0         0         0         0         0         0
*      102          15         0         0         5         0         0         0         0         0         0         0         0         0
*      103           7         0         0         0         0         0         0         0         0         0         0         0         0
*      104           0         0         0         0         0         0         0         0         0         0         0         0         0
*      105           0         0         0         0         0         0         0         0         0         0         0         0         0
*
*      TOTAL          82         0         0        263         0         0         0         0         0         0         0         0         0

```

\* Turbidity prevented survey below Otter Creek. Otter Creek to Nyac was difficult due to green water color obscuring deeper portions of stream. Water was high due to recent rains. Turbidity appeared to be natural.

* 08/01/87 Quality: 1. Rating: 1 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	---
178	9	DW	ADFT	2	1	1	1	1	1	1	10	
INDEX		Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101		0	0	0	0	0	0	0	0	0	0	0
102		86	0	0	25	0	0	0	0	0	0	0
103		0	0	0	0	0	0	0	0	0	0	0
104		0	0	0	0	0	0	0	0	0	0	0
105		0	0	0	0	0	0	0	0	0	0	0
TOTAL		86	0	0	25	0	0	0	0	0	0	0

\* This survey was done by Doug Weir who has been the resident naturalist at Nyac for the preceeding 10 years or so. He surveyed most of the small tailing streams. The counts were made from 21 Jul through 1 August so there is some chance of double counting.

* 07/21/88 Quality: 1. Rating: 1 *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
---	---	---	---	---	---	---	---	---	---	---	---	---
220	11	MS	BLM	2	1	1	1	1	1	1	7	
INDEX		Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
101		0	0	0	0	0	0	0	0	0	0	0
102		57	0	0	210	0	1	0	0	0	0	0
103		0	0	0	0	0	0	0	0	0	0	0
104		0	0	0	0	0	0	0	0	0	0	0
105		0	0	0	0	0	0	0	0	0	0	0
TOTAL		57	0	0	210	0	1	0	0	0	0	0

\* MS = Mike Scott. Upper Tuluksak River Chinook Salmon Enhancement project report, 20 June - 26 July, 14 - 15 September, 1988. Weir installed on 4 July by BLM with ADFG advice and technical assistance. Purpose to test feasibility of chinook enhancement. Weir and incubation techniques were tested. Salmon passed before weir was installed and after removal on 21 July.

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

\* 07/28/88      Quality: 0.75      Rating: 2      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
212	2F	DS	ADFG	3		2	2	2	2	2	1	59
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	188	7	97	1445	243	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	188	7	97	1445	243	0	0	0	0	0	0	0

\* Slightly past peak of spawning. Survey began about 5 miles north of Nyac on Tuluksak area 102, ended 5 miles above Fog River. Water=1 in upper end and 3 near Fog River. USFWS C-185 on floats. Pilot: George Walters. USFWS observer: Ray Jones. \*

\* 07/18/90      Quality: 1      Rating: 1      \*

Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance
294	2F	DM	ADFG	1		1	1	1	1	1	1	45
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	200	0		1634	0							
102		0			0							
103	5	0		0	0							
104												
105												
TOTAL	205	0	0	1634	0	0	0	0	0	0	0	0

\* Fish in survey area 101 and 102 combined - 101/102 boundary not identified. Fish in 103 less than 1/2 mile upstream of bridge at Nyac. \*

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

\* 07/24/91      Quality:    0.8      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
319	2F	CB	ADFG	2	1	2	2	2	2	2	50	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101	342	2		1314							
	102	14										
	103											
	104											
	105											
TOTAL		356	2	0	1314	0	0	0	0	0	0	0

\* USF&WS C-185 with George Walters pilot. Some glare when looking west. Survey started at USF&WS weir about 5 miles upsteraam of Fog River confluence. \*

\* 08/26/91      Quality:    0.95      Rating:      1      \*

Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
320	1F	CB	ADFG	1	1	2	1	1	1	1	40	
	INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho
	101										121	
	102											
	103											
	104											
	105											
TOTAL		0	0	0	0	0	0	0	0	0	121	0

\* USF&WS SuperCub with Chris Chrlatenson pilot. 31 cohas below weir. Water from Fog River to weir to muddy to see fish. \*

Stream: TULUKSAK RIVER

Drainage: KUSKOKWIM RIVER

Latitude: 610600N

Longitude: 1605800W

---

* 09/03/91	Quality:		0.75	Rating:		1									
* Seq	Method	Obs	Agency	Spawn	Stg	Wind	Weather	Water	Water	Vis.	Bottom	Sun	Angle	Distance	
* 321	1F	CB	AODG	1	2	3	2	2	1	1	40				
* INDEX	Live	Dead	Chinook	Live	Dead	Live	Dead	Live	Dead	Live	Dead	Live	Dead		
	Chinook	Chinook	Redd	Chum	Chum	Pink	Pink	Sockeye	Sockeye	Coho	Coho				
* 101												1022			
* 102															
* 103															
* 104															
* 105															
* TOTAL	0	0	0	0	0	0	0	0	0	0	0	1022	0		
* USF&WS SuperCub with Chris Christenson pilot. Surveyed from Fog River to bridge at Nyac. 100 coho just below weir.															

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Stream: TWO LAKES

Drainage: NECONS RIVER/STONY R.

Latitude: 610730N

Longitude: 1534500W

* 07/27/85      Quality:    0.8      Rating:      3      *												
Seq	Method	Obs	Agency	Spawn Stg	Wind	Weather	Water	Water Vis.	Bottom	Sun Angle	Distance	
88	6	DS	ADFG	1	1	1	3	1	3	1	20	
INDEX	Live Chinook	Dead Chinook	Chinook Redd	Live Chum	Dead Chum	Live Pink	Dead Pink	Live Sockeye	Dead Sockeye	Live Coho	Dead Coho	
101	0	0	0	0	0	0	0	20	0	0	0	
102	0	0	0	0	0	0	0	0	0	0	0	
103	0	0	0	0	0	0	0	0	0	0	0	
104	0	0	0	0	0	0	0	0	0	0	0	
105	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	20	0	0	0	

\* TWO LAKES IS MUCH MORE TURBID THAN TELAQUANA. IF SOCKEYE ARE PRESENT IN SIGNIFICANT NUMBERS, THEY ARE HIDDEN BY SILTY WATERS. \*

Stream: UNNAMED CREEK/MAGAKTLEK CR.

Drainage: AROLIK RIVER

Latitude: 594400N

Longitude: 1613500W

```

* 09/04/84      Quality:      1.      Rating:      1      *
*
*      Seq  Method  Obs  Agency  Spawn Stg  Wind  Weather  Water  Water Vis.  Bottom  Sun Angle  Distance  *
*      ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  ---  *
*      60   1     KF   ADFG    1         1     1       1     1       1       1       1       1     *
*
*      INDEX      Live      Dead      Chinook      Live      Dead      Live      Dead      Live      Dead      Live      Dead      *
*                  Chinook  Chinook  Redd      Chum      Chum      Pink     Pink     Sockeye  Sockeye  Coho     Coho     *
*
*      101         0         0         0         0         0         0         0         0         0         0         2         0     *
*      102         0         0         0         0         0         0         0         0         0         0         0         0     *
*      103         0         0         0         0         0         0         0         0         0         0         0         0     *
*      104         0         0         0         0         0         0         0         0         0         0         0         0     *
*      105         0         0         0         0         0         0         0         0         0         0         0         0     *
*
*      TOTAL         0         0         0         0         0         0         0         0         0         0         2         0     *
*
* WHILE IN ROUTE FROM GOODNEWS TO BETHEL CROSSED UNNAMED TRIB. OF MAGAKTLEK CREEK WHICH IS TRIB. OF NORTH FORK AROLIK RIVER AND SAW PAIR *
* OF SPAWNING COHO. *
*

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Appendix A. Data type definitions for Kuskokwim Area salmon escapement observation database.

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SEQUENCE: unique number assigned to a new row of data at time of entry.  
LATITUDE: standard latitude of a point near a body of water or tributary mouth.  
LONGITUDE: standard longitude of a point near a body of water or tributary mouth.  
STREAM: standard stream name as used in the Kuskokwim River Salmon Observation Catalog.  
DRAINAGE: standard drainage name as used in the Kuskokwim River Salmon Observation Catalog.  
DATE: date of an observation.  
METHOD: primary equipment or technique used to obtain an observation (an F appended to an aircraft code denotes that it is equipped with floats).

1. Super Cub	5. Maule	9. Foot Survey	13. Tagging Estimates
2. Cessna 185	6. Other Fixed Wing Aircraft	10. Counting Tower	14. Personal Interview
3. Cessna 180	7. Helicopter	11. Weir	15. Literature Review
4. Hellocourier	8. Boat	12. Sonar	

WIND: to what extent did wind affect the visibility of salmon either by roughing the water surface or by affecting aircraft handling and attitude during the survey?

1. No effect	3. Moderate riffs or turbulence, affecting counts
2. Slight riffs or turbulence, slight effect on counts	4. Heavy riffs or turbulence, major effect on counts

WEATHER: what portion of the sky is obscured by clouds?

1. Clear	3. Moderately Overcast (31-70%)
2. Slightly Overcast (5-30%)	4. Overcast (71-100%)

WATER: to what extent does water clarity prevent salmon observation?

1. Clear, no effect	3. Moderately turbid, bottom visible in shallow areas
2. Slightly turbid, deep pools obscured.	4. Extremely turbid, counts not possible

WATER VISIBILITY: how easily is the water surface seen through glare, trees, shadows, ice, etc.?

1. Good visibility, optimum conditions	3. Moderate visibility, water frequently obscured
2. Fair visibility, water surface seldom obscured	4. Poor visibility, water usually obscured

BOTTOM: does the color and/or pattern of the stream or lake bottom camouflage salmon?

1. Light colored bottom, little pattern, optimum	3. Slightly dark with darker fish-sized pattern
2. Light colored bottom, some fish-sized dark pattern	4. Dark with extensive darker fish-sized pattern

TIME (SUN ANGLE): does the time of day and the associated angle of incidence of sunlight affect salmon visibility?

1. Near local noon, sun angle greatest, optimum	3. Well before or after local noon, shadows long
2. Before or after local noon, shadows somewhat longer	4. Early or late in the day shade dominates

DISTANCE: approximate air miles surveyed (survey time in hours times airspeed in miles per hour).

SPAWN STAGE: are salmon present in maximum numbers?

1. Before peak, number of salmon is increasing	3. After peak, number of salmon is decreasing
2. Peak, number of salmon is maximum	

RATING: what is the observers impression of the effectiveness of the survey?

1. Good, salmon visibility good to optimum, survey at peak of spawning
2. Fair, salmon mostly visible, survey at peak of spawning
3. Poor, salmon difficult to view and/or survey not at or near peak of spawning

QUALITY: computed as  $1.25 - ((\text{wind} + \text{weather} + \text{water} + \text{water vis.} + \text{bottom} + \text{time})/24)$ .

OBSERVER: observer's initials (up to 4 characters).  
AGENCY: observer's organizational affiliation (up to 4 characters).  
COMMENTS: notes which amplify or add to various aspects of the observation (up to 855 characters).  
INDEX AREA: standard stream areas defined in the pre-1984 historic data record (Kuskokwim Stream Catalog, 1954-1983).

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Appendix B. Observer and agency index for Kuskokwim Area salmon escapement observation database.

NAME		INITIALS	AFFILIATION	AGENCY
Alt	Ken	KA	Ak. Dept. Fish/Game	ADFG
Anderson	Cindy	CA	Ak. Dept. Fish/Game	ADFG
Arvey	Bill	BA	Ak. Dept. Fish/Game	ADFG
Baxter	Rae	RB	Ak. Dept. Fish/Game	ADFG
Brannian	Linda	LB	Ak. Dept. Fish/Game	ADFG
Burkey	Charlie	CB	Ak. Dept. Fish/Game	ADFG
DeCicco	Fred	FD	Ak. Dept. Fish/Game	ADFG
Francisco	Kim	KF	Ak. Dept. Fish/Game	ADFG
Granrota	K.	KG	Private Citizen	PRIV
Huttunen	Dan	DH	Ak. Dept. Fish/Game	ADFG
Jonrowe	Mike	MJ	Ak. Dept. Fish/Game	ADFG
Kuhlman	Fritz	FK	Ak. Dept. Fish/Game	ADFG
Lisac	Mark J.	MJL	US Fish & Wildlife	USFW
Molyneaux	Doug	DM	Ak. Dept. Fish/Game	ADFG
Pennoyer	Steve	SP	Ak. Dept. Fish/Game	ADFG
Regnart	Ron	RR	Ak. Dept. Fish/Game	ADFG
Schaefer	Gary	GS	Ak. Dept. Fish/Game	ADFG
Schneiderhan	Dan	DS	Ak. Dept. Fish/Game	ADFG
Schultz	Keith	KS	Ak. Dept. Fish/Game	ADFG
Scott	Mike	MS	Bureau of Land Mgt.	BLM
Weagle	Ken	KW	Bureau of Land Mgt.	BLM
Weir	Doug	DW	Northland Gold Corp.	NGCO
Yanagawa	Carl	CY	Ak. Dept. Fish/Game	ADFG



Appendix C. Stream location index for Kuskokwim Area salmon escapement database.

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
3 LAKES BELOW KAGATI LAKE	Kanektok River	595400N	1601500W	GO-D3
101 entire		104 none		
102 none		105 none		
103 none				
*****				
ANIAX RIVER	Kuskokwim River	613440N	1592910W	RM-C2
101 Mouth to Buckstock River		104 Gemuk Mountain to Aniak Lake		
102 Buckstock River to Salmon River		105 none		
103 Salmon River to Gemuk Mountain				
*****				
ANIAX SONAR PROJECT	Aniak River	613009N	1592226W	RM-C2
101 none		104 none		
102 none		105 none		
103 none				
*****				
AROLIK LAKE	Arolik River	592900N	1610600W	GO-C8
101 entire		104 none		
102 none		105 none		
103 none				
*****				
AROLIK RIVER	Kuskokwim Bay	593800N	1613600W	GO-C8
101 North River to South/East Fork		104 East Fork to Arolik Lake		
102 South River to South/East Fork		105 none		
103 South Fork				
*****				
AWAYAK LAKE NORTH	Goodnews River	593000N	1603636W	GO-C5
101 entire		104 none		
102 none		105 none		
103 none				
*****				
AWAYAK LAKE SOUTH	Goodnews River	592900N	1603600W	GO-C5
101 entire		104 none		
102 none		105 none		
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
BARNUM CREEK	Goodnews River	591500N	1612300W	GO-B7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BEAR CREEK	Tuluksak River	610000N	1595800W	BE-D3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BEAR CREEK/PITKA FORK	Middle Fork/Big River	625100N	1543300W	MG-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BIG RIVER	Kuskokwim River	625800N	1545300W	MG-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BIG SALMON FORK	Little Tonzona River	625720N	1535530W	ME-A2
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BLACKWATER CREEK	Big River	625730N	1545345W	MG-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BUCKSTOCK RIVER	Aniak River	612100N	1591400W	RM-B1
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
CAN CREEK	Stony River	611600N	1550100W	LH-B6
101 Mouth to foothills	104 none			
102 Foothills to headwaters	105 none			
103 none				
*****				
CANYON CREEK	Kwethluk River	601400N	1601500W	BE-B4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
CANYON LAKE	Goodnews River	592600N	1610900W	GO-B6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
CARTER CREEK	Kuskokwim Bay	591700N	1615600W	GO-B8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
CHEENETNUK RIVER	Swift River	614850N	1560030W	LH-D8
101 Mouth to foothills	104 none			
102 Foothills to Shoelather Creek	105 none			
103 Shoelather Creek to headwaters				
*****				
CHINEEKLUK CREEK	Holokuk River	612200N	1581900W	ST-B6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
CHINEEKLUK LAKE	Chineekluk Creek/Holokuk R.	611900N	1575155W	ST-B5
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
CHUILNUK LAKE	Holitna River	612030N	1574730W	ST-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
CHUKOWAN RIVER	Holitna River	605000N	1575000W	TM-D5
101 Mouth to Enatalik Creek	104 none			
102 none	105 none			
103 none				
*****				
CRIPPLE CREEK	Kuskokwim Bay	592500N	1612100W	GO-B8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
CROOKED CREEK	Kuskokwim River	615210N	1580800W	ST-D6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
DENNIS CREEK	Tonzona River	630930N	1533210W	ME-A1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
DILLINGER RIVER	South Fork Kuskokwim River	623440N	1533340W	MG-C1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
DONLIN CREEK	Crooked Creek	620445N	1581300W	ID-A5
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
EAGLE MOUNTAIN CREEK	Stony River	610800N	1542900W	LB-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
EAST FORK GEORGE RIVER	George River	615900N	1573400W	ST-D5
101 Mouth to North Fork (same as George R.)	104 none			
102 North Fork to headwaters (George River)	105 none			
103 none				
*****				
EAST FORK KUSKOKWIM RIVER	Kuskokwim River	630700N	1543500W	ME-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
EAST FORK OSKAWALIK RIVER	Oskawalik River	613405N	1574030W	ST-C5
101 entire	104 none			
102 none	105 none			
103 none				
*****				
EK MIDDLE FORK RIVER	Eek River	600800N	1613500W	BE-A7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
EK RIVER	Kuskokwim River	601200N	1621500W	BI-A1
101 Mouth to Middle Fk. Eek River	104 Eek Lake Creek to Rainy Creek Airstrip			
102 Middle Fk. Eek River to Great Ridge	105 Rainy Creek Airstrip to headwaters			
103 Great Ridge to Eek Lake Creek				
*****				
FOG RIVER	Tuluksak River	610500N	1604500W	RM-A5
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
GAGARYAB RIVER	Swift River	613715N	1553840W	LH-C6
101 Mouth to ridge on north side	104 none			
102 North side ridge to hill 2550	105 none			
103 none				
*****				
GEMUK LAKE	Gemuk River	603400N	1585600W	TM-C8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
GEMUK RIVER	Chukowan River	604700N	1583200W	TM-D7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
GEORGE RIVER	Kuskokwlm River	615400N	1574200W	ST-D5
101 Mouth to North Fork (see E. Fk. George)	104 none			
102 North Fork to headwaters (see E.Fk.G.R.)	105 none			
103 none				
*****				
GOLD LAKE	Gold Creek/Kisaralik R.	601251N	1592730W	BE-A2
101 entire	104 none			
102 none	105 none			
103 none				
*****				
GOODNEWS LAKE	Goodnews River	593000N	1613100W	GO-B5
101 entire	104 none			
102 none	105 none			
103 none				
*****				
GOODNEWS MID. FK. TOWER PROJ	Middle Fork Goodnews River	591000N	1612500W	GO-A6
101 none	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
GOODNEWS MIDDLE FORK LAKES	Middle Fork Goodnews River	592400N	1603600W	GO-B5
101 North Lake and inlet creek to headwaters	104 Upper Kukaktlim Lake Cr. to headwaters			
102 South Lake and inlet creek to headwaters	105 none			
103 Kukaktlim Lakes & inlet cr. to U.Kuk, L.				
*****				
GOODNEWS MIDDLE FORK RIVER	Goodnews River	590800N	1612900W	GO-A7
101 Mouth to fork of North and South L. Crs.	104 Kukaktlim Creek			
102 North Lake Creek	105 none			
103 South Lake Creek				
*****				
GOODNEWS RIVER	Kuskokwim Bay	590700N	1613500W	GO-A7
101 Mouth to Slate Creek	104 none			
102 Slate Creek to Ningum Creek	105 none			
103 Ningum Creek to Goodnews Lake				
*****				
GRANITE CREEK	Tuluksak River	605830N	1600550W	BE-D3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
HIGHPOWER CREEK	Swift Fork Kuskokwim River	632500N	1530700W	ME-B1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
BOBOLITNA RIVER	Holitna River	613035N	1565900W	ST-C3
101 Whitefish Lake to South Fork Hobolitna	104 none			
102 South Fork Hobolitna R. to mouth	105 none			
103 none				
*****				
HOLIINA RIVER	Kuskokwim River	614045N	1571000W	ST-C4
101 Mouth to Nogamut	104 Kashegelok to Kogruklu River Weir			
102 Nogamut to Kiknik Creek	105 none			
103 Kiknik Creek to Kashegelok				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
HOLOKUK LAKE	Holokuk River	613216N	1583536W	ST-C7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
HOLOKUK RIVER	Kuskokwim River	613215N	1583535W	ST-C7
101 Mouth to Ski Creek	104 none			
102 Ski Creek to Chinesekluk Creek	105 none			
103 Chinesekluk Creek to headwaters				
*****				
INDIAN CREEK	Carter Bay/Kuskokwim Bay	591800N	1615830W	GO-B8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
JACKSMITH CREEK	Jacksmith Bay/Kuskokwim Bay	592900N	1614500W	GO-B8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
JONES RIVER	South Fork Kuskokwim River	623415N	1533330W	MG-C2
101 entire	104 none			
102 none	105 none			
103 none				
*****				
K8-2 (location unknown)	Stony River	614611N	1563521W	ST-D1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
KAGATI LAKE	Kanektok River	595200N	1600500W	GO-D3
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
KALMAKOF RIVER	Kuskokwim River	613430N	1585330W	ST-C8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
KANEKTOK RIVER	Kuskokwim Bay	594500N	1615600W	GO-C8
101 Mouth to Nukluk Creek	104 Kagati Lake			
102 Nukluk Creek to Kanuktik Creek	105 Kagati Lake to headwaters			
103 Kanuktik Creek to Lake Kagati				
*****				
KANEKTOK SONAR PROJECT	Kanektok River	594653N	1614806W	GO-C8
101 none	104 none			
102 none	105 none			
103 none				
*****				
KANEKTOK TOWER (LOWER)	Kanektok River	594621N	1615018W	GO-C8
101 none	104 none			
102 none	105 none			
103 none				
*****				
KANEKTOK TOWER (UPPER)	Kanektok River	595258N	1600746W	GO-C8
101 none	104 none			
102 none	105 none			
103 none				
*****				
KANUKTIK CREEK	Kanektok River	595300N	1602800W	GO-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
KANUKTIK LAKE	Kanuktik Creek/Kanektok R.	594400N	1601900W	GO-C4
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
KASIGLUK RIVER	Kuskokwim River	605045N	1611400W	BE-D6
101 Mouth to first cutoff	104 Little Kasigluk River to Canyon			
102 First cutoff to second cutoff	105 none			
103 Second cutoff to Little Kasigluk River				
*****				
KASIGLUK SONAR	Kasigluk River/Kuskokwim R.	604808N	1605756W	BE-D6
101 none	104 none			
102 none	105 none			
103 none				
*****				
KINEGNAK RIVER	Chagvan Bay	584915N	1614045W	BI-D6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
KIPCHUK RIVER	Aniak River	610300N	1591000W	RM-A1
101 Mouth to valley above canyon	104 none			
102 Canyon loop	105 none			
103 Canyon loop to headwaters				
*****				
KISARALIK LAKE	Kisaralik River	601100N	1592500W	BE-B2
101 entire	104 none			
102 none	105 none			
103 none				
*****				
KISARALIK RIVER	Kuskokwim River	605130N	1611400W	BE-D6
101 Mouth to south 90 degree turn	104 none			
102 South 90 degree turn to Goldengate Falls	105 none			
103 Goldengate Falls to Kisaralik Lake				
*****				
KOGRUKLUK RIVER	Holitna River	604900N	1575100W	TM-D5
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
KOGRUKLUK TOWER	KogrukluK River/Holitna R.	604947N	1575051W	TM-D5
101 none		104 none		
102 none		105 none		
103 none				
*****				
KOGRUKLUK WEIR	KogrukluK River/Holitna R.	604947N	1575052W	TM-D5
101 none		104 none		
102 none		105 none		
103 none				
*****				
KUKAKTLIM LAKES	Kukaktlim Cr./M Fk Goodnews	592000N	1603000W	GO-B4
101 entire		104 none		
102 none		105 none		
103 none				
*****				
KUSKOKWIM RIVER	Kuskokwim Bay	600500N	1622500W	KB-D1
101 Mouth to Tuluksak River		104 Holitna River to McGrath		
102 Tuluksak River to Aniak River		105 McGrath to headwaters		
103 Aniak River to Holitna River				
*****				
KWETHLUK RIVER	Kuskokwim River	604900N	1612700W	BE-D7
101 Mouth to Three-step Mountain		104 Canyon Creek to headwaters		
102 Three-step Mountain to Elbow Mountain		105 none		
103 Elbow Mountain to Canyon Creek				
*****				
KWETHLUK SONAR	Kwethluk River	602805N	1610610W	BE-D7
101 none		104 none		
102 none		105 none		
103 none				
*****				
LAKE ABOVE KANUKTIK LAKE	Kanuktik Creek/Goodnews R.	594500N	1601000W	GO-C4
101 entire		104 none		
102 none		105 none		
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
LITTLE KASIGLUK RIVER	Kasigliuk River/Kuskokwim R.	604100N	1603600W	BE-C5
101 entire		104 none		
102 none		105 none		
103 none				
*****				
LITTLE TONZONA RIVER	South Fork Kuskokwim River	625756N	1632139W	MG-D3
101 entire		104 none		
102 none		105 none		
103 none				
*****				
LITTLE UNDERBILL CREEK	Stony River	614545N	1544740W	LE-C4
101 entire		104 none		
102 none		105 none		
103 none				
*****				
NIXON FORK	Takotna River	630200N	1554000W	MG-D6
101 entire		104 none		
102 none		105 none		
103 none				
*****				
NORTH FORK GEORGE RIVER	George River	620300N	1573400W	ID-A4
101 entire		104 none		
102 none		105 none		
103 none				
*****				
NORTH FORK KUSKOKWIM RIVER	Kuskokwim River	630700N	1543400W	ME-A4
101 entire		104 none		
102 none		105 none		
103 none				
*****				
NUKLUK CREEK	Kanektok River	594300N	1605800W	GO-C6
101 entire		104 none		
102 none		105 none		
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
OPHIR CREEK	Whitefish Lake	612000N	1600000W	RM-B4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
OSKAWALIK RIVER	Kuskokwim River	614430N	1581130W	ST-C6
101 Mouth to South Creek	104 Henderson Mountain to headwaters			
102 South Creek to East Creek	105 none			
103 East Creek to Henderson Mountain				
*****				
OWHAT RIVER	Kuskokwim River	613600N	1592500W	RM-C2
101 entire	104 none			
102 none	105 none			
103 none				
*****				
OYAK CREEK	KUSKOKWIM BAY	594743N	1615700W	GO-D8
101 entire	104 none			
102 none	105 none			
103 none				
*****				
PITKA FORK	Middle Fork River	625600N	1544500W	MG-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
POST RIVER	South Fork Kuskokwim River	622400N	1532800W	MG-B1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
POTHOLES LAKES	Goodnews River	592002N	1603002W	GO-B5
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
QUICKSILVER CREEK	Kisaralik River	602305N	1595905W	BE-B3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
QUICKSILVER LAKES	Quicksilver Cr./Kisaralik R.	602300N	1595900W	BE-B3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SALMON RIVER	Kuskokwim Bay	585143N	1614556W	BI-D6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SALMON RIVER/ANIAK RIVER	Kuskokwim River	610400N	1591100W	RM-A1
101 Mouth to Marvel Creek	104 none			
102 Marvel Creek to Cripple Creek	105 none			
103 Cripple Creek to headwaters				
*****				
SALMON RIVER/PITKA FORK	Middle Fork/Big River	625330N	1543420W	MG-D4
101 Mouth to fork	104 South Fork			
102 North Fork	105 none			
103 Middle Fork				
*****				
SELATNA RIVER	Kuskokwim River	623100N	1554800W	MG-C6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SHOTGUN CREEK	Holitna River	604901N	1575101W	TM-D5
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
SLATE CREEK	Tuluksak River	605900N	1600100W	BE-D3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SODA CREEK	North Fork Kuskokwim River	631500N	1540100W	ME-B3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SOUTH FORK GOODNEWS RIVER	Goodnews River	590730N	1612930W	GO-A7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SOUTH FORK BOBOLITNA RIVER	Bobolitna River/Bolitna R.	605400N	1561500W	TM-D1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SOUTH FORK KUSKOKWIM RIVER	Kuskokwim River	630500N	1543900W	ME-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SOUTH LAKE	Goodnews River	592401N	1603601W	GO-C5
101 entire	104 none			
102 none	105 none			
103 none				
*****				
STINK RIVER	Stony River	611030N	1560750W	ST-C1
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
STONY RIVER	Kuskokwim River	614610N	1563520W	ST-D1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SULLIVAN CREEK	Pitka Fork	624800N	1542900W	MG-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
SWIFT RIVER	Kuskokwim River	615320N	1561830W	ST-D1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TAKOTNA RIVER	Kuskokwim River	630200N	1554000W	ID-D1
101 Mouth to Village of Takotna	104 none			
102 Village of Takotna to Fourth of July Cr.	105 none			
103 Fourth of July Creek to Waldron Fork				
*****				
TAKSHILIK CREEK	Kanaktok River	594400N	1610000W	GO-C6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TATINA RIVER	South Fork Kuskokwim River	621800N	1532300W	MG-B1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TATLAWIKSUK RIVER	Kuskokwim River	615510N	1561430W	ST-D1
101 Mouth to foothills (1172 Witsuk marker)	104 none			
102 Foothills to hill 1465	105 none			
103 Hill 1465 to headwaters				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
TELAQUANA LAKE	Stony River	605700N	1535200W	LC-D3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TELAQUANA RIVER	Stony River	610410N	1542430W	LC-D3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TEVYARAQ L. (FORMER UNNAMED)	Holokuk River	611700N	1580200W	ST-A6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TEVYARAQ LAKE	Chineekluk Creek/Balokuk R.	611605N	1580143W	ST-B6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TITNUK CREEK	Holitna River	612100N	1570300W	ST-B3
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TROUT LAKE	Stony River	611700N	1553200W	LH-A7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TULUKSAK RIVER	Kuskokwim River	610600N	1605800W	RM-A6
101 Mouth to Foothills	104 none			
102 Foothills to Nyac	105 none			
103 Nyac to headwaters				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
TULUKSAK WEIR (BLM)	Tuluksak R./Kuskokwim River	605800N	1600500W	BE-D3
101 none	104 none			
102 none	105 none			
103 none				
*****				
TUNKALESHA CREEK	Stony River	610700N	1542600W	LB-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TUNULIK RIVER	Goodnews Bay	590800N	1613730W	GO-A7
101 entire	104 none			
102 none	105 none			
103 none				
*****				
TWO LAKES	Stony River	610730N	1534500W	LB-A2
101 entire	104 none			
102 none	105 none			
103 none				
*****				
UNALUK RIVER	Kinegnak River	585000N	1613800W	BI-D5
101 entire	104 none			
102 none	105 none			
103 none				
*****				
UNNAMED TRIBUTARY	Big River	624500N	1544000W	MG-D4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
UNNAMED TRIBUTARY	Chinsakluk Creek	611930N	1580200W	ST-B6
101 entire	104 none			
102 none	105 none			
103 none				
*****				

STREAM	DRAINAGE	LATITUDE	LONGITUDE	USGS MAP
UNNAMED TRIBUTARY	George River	620301N	1573401W	ID-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
UNNAMED TRIBUTARY	North Fork Swift River	613500N	1544500W	LH-C5
101 entire	104 none			
102 none	105 none			
103 none				
*****				
UNNAMED TRIBUTARY	Stony River	610200N	1541500W	LH-A4
101 entire	104 none			
102 none	105 none			
103 none				
*****				
UNNAMED TRIBUTARY	Swift River	613000N	1550000W	LH-C6
101 entire	104 none			
102 none	105 none			
103 none				
*****				
WATERBOOT CREEK	Aniak River	605400N	1590000W	BE-D1
101 entire	104 none			
102 none	105 none			
103 none				
*****				
WEST FORK OSKAWALIK RIVER	Oskawalik River	613200N	1574300W	ST-C5
101 entire	104 none			
102 none	105 none			
103 none				
*****				
WHITEFISH LAKE	Ophir Creek	612200N	1600100W	RM-B3
101 entire	104 none			
102 none	105 none			
103 none				
*****				